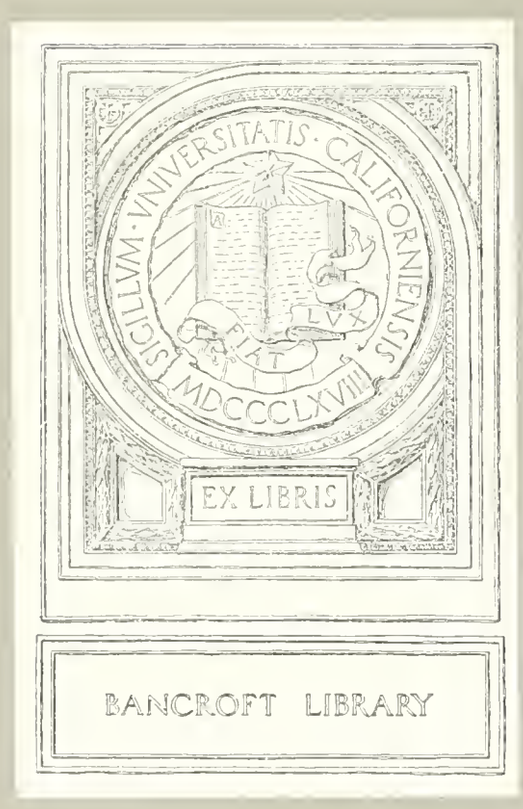

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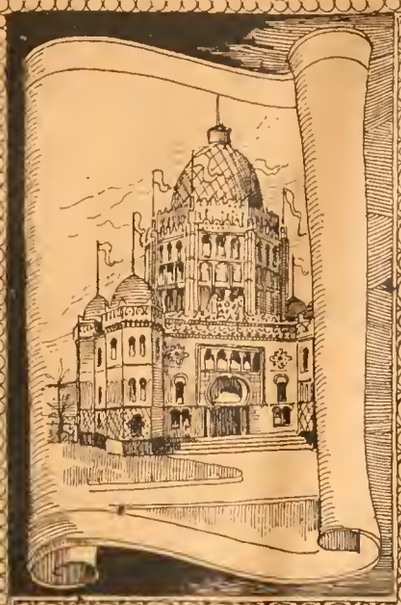

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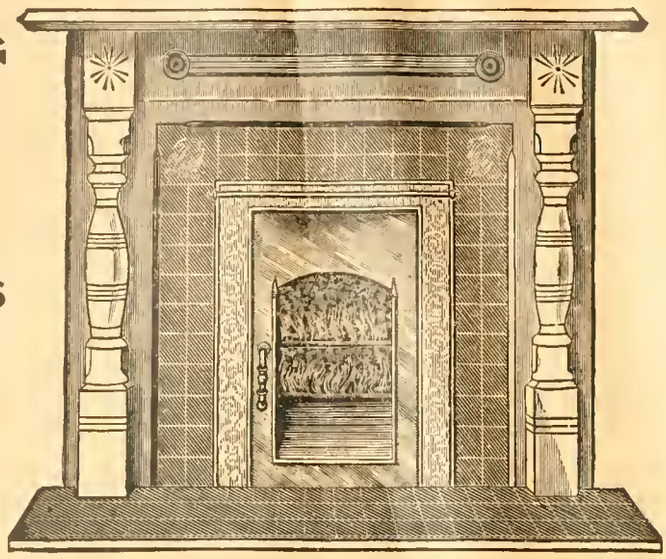

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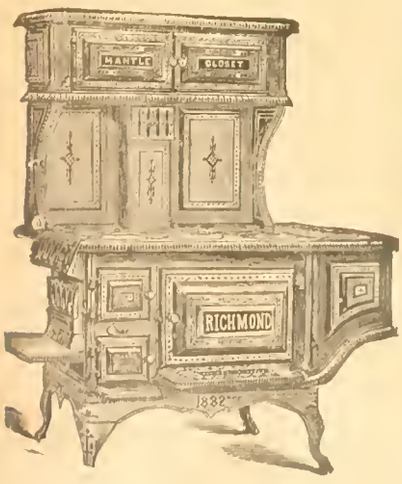

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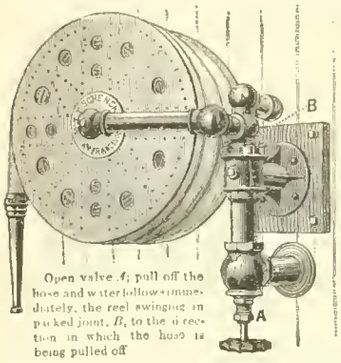

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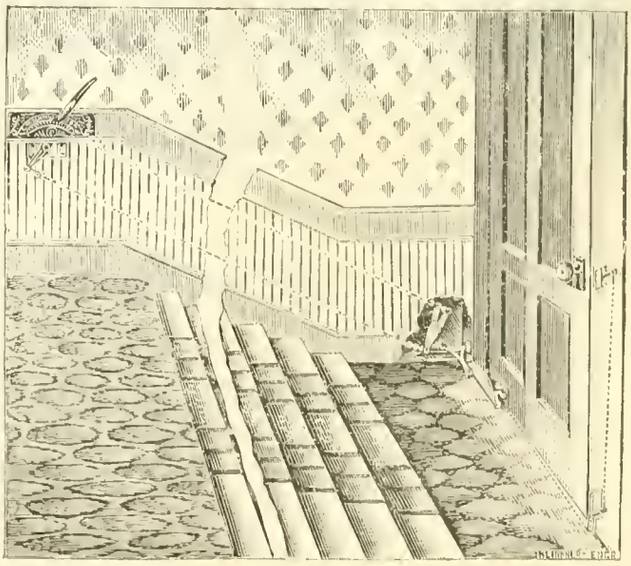

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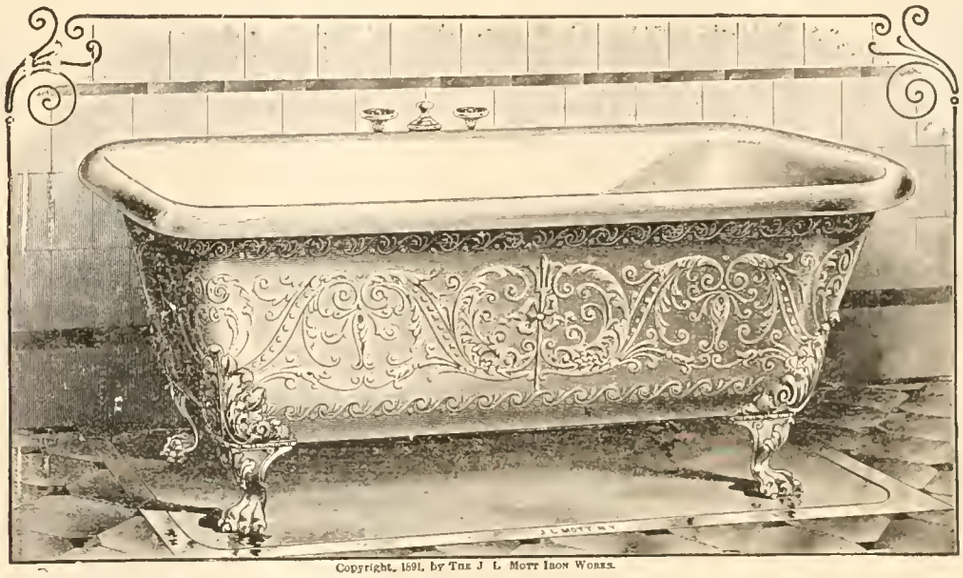

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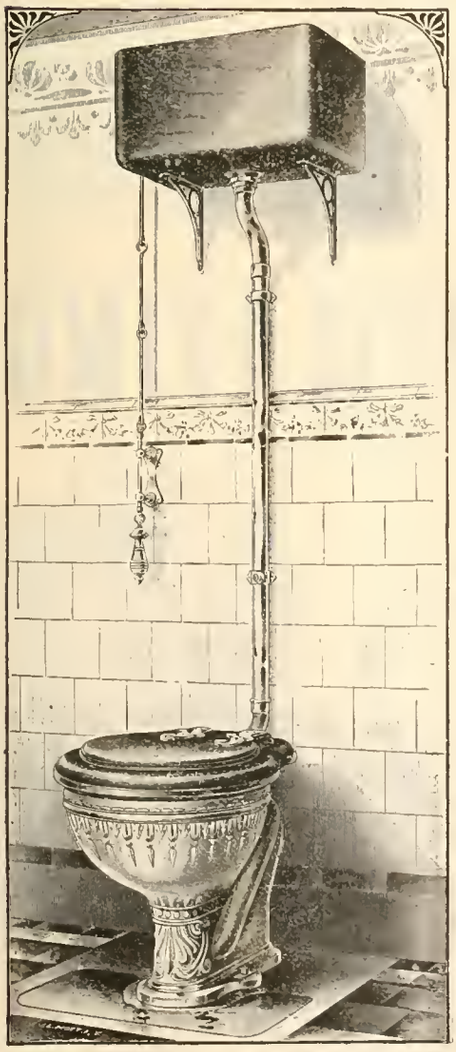

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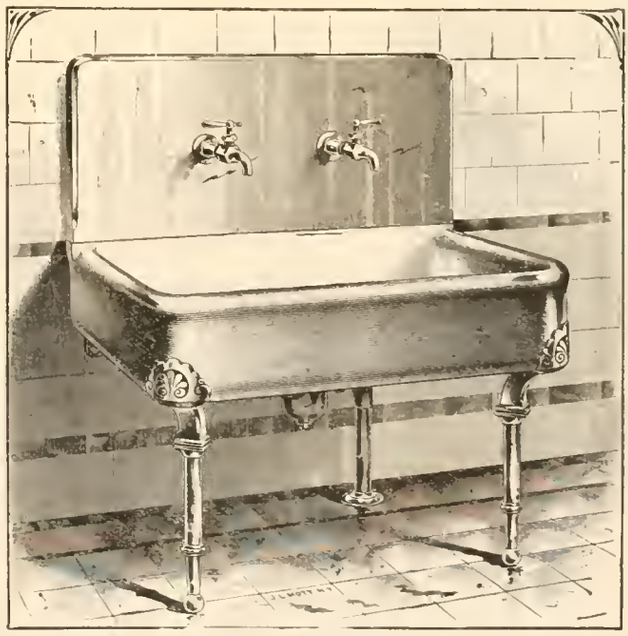

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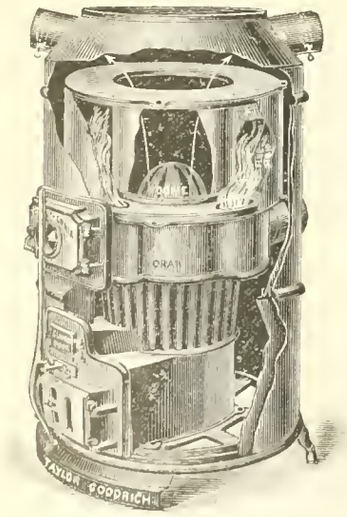

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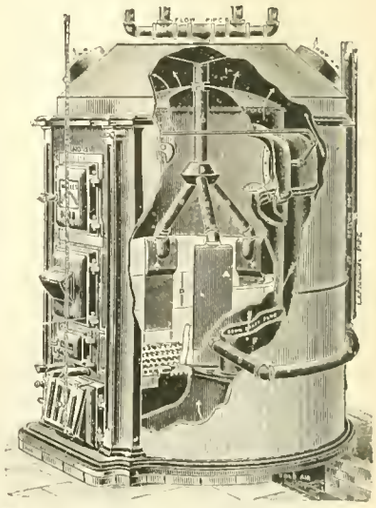

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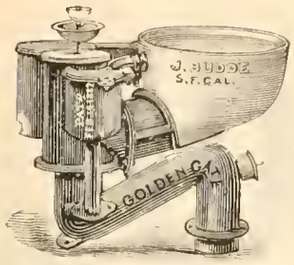

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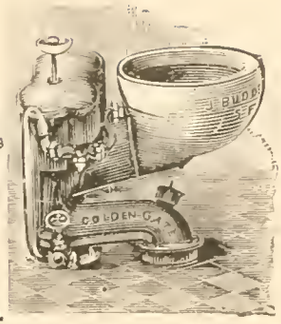

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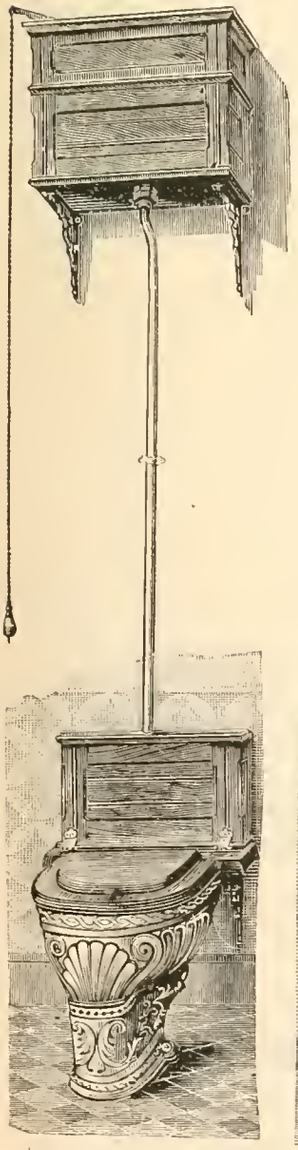

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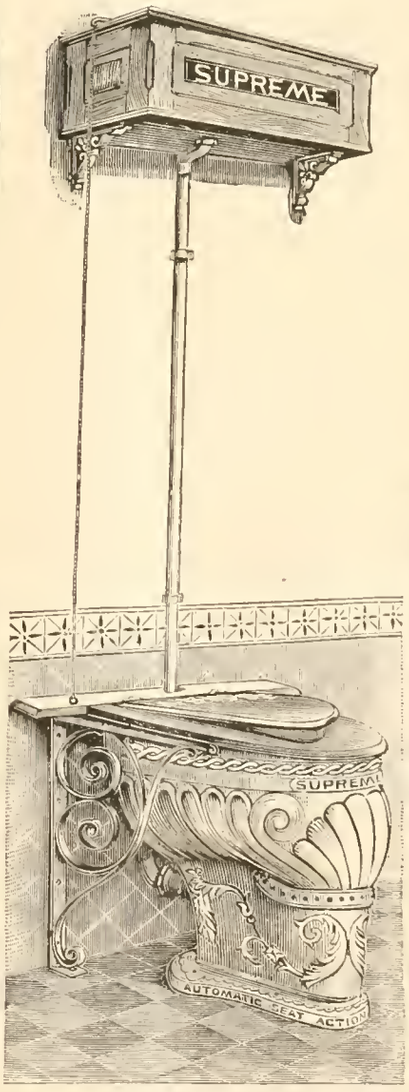
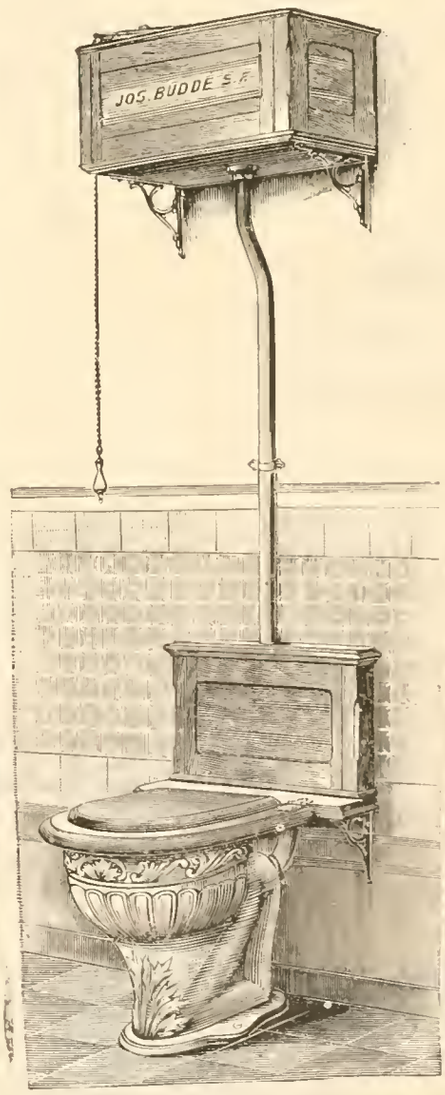


Self-acting "Supreme Closet" suitable for Hospitals, Hotels and Schools. Price complete with wood work and nickel-plated flush pipe, $35 to $40.



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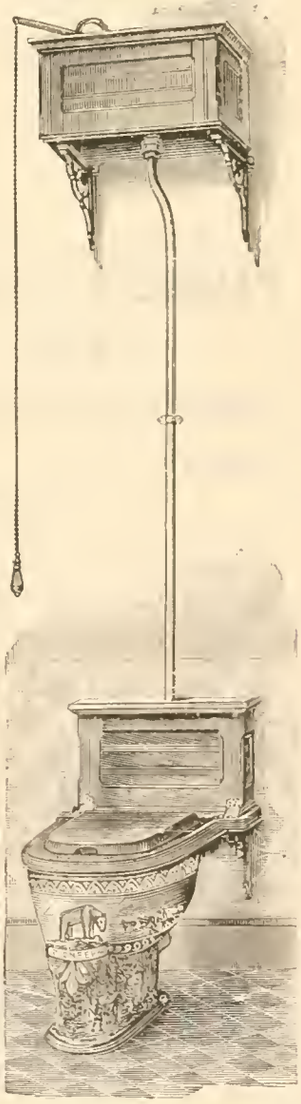

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OF the many bills introduced in the present legislature, the one to regulate the practice of Architecture in the State of California, formulated by the San Francisco Chapter and the Southern California Chapter of the American Institute of Architects, is of special interest to the profession. It is a step in line with the attempts that have been made of late years in Eastern States to legislate on the subject. There is no valid reason why the public should not be protected from unscrupulous practitioners in the noble art of architecture, in the same manner as in the case of lawyers and doctors.

The questions concerning life, health and property that have to be decided by the Architect, are quite as numerous and important as similar questions handled by the other professions just mentioned, and the men interested in educating the public to a just appreciation of the desirability of the proposed law, are hopeful of success. While we cannot have the credit of being the first State to make this step of progress, yet we hope California will not lag too far behind her sister States in a matter of such public interest. The proposed bill has received the careful consideration of the Chapters of the Institute in this State, and while not precisely the same as the laws favored by the legislatures of New York and Texas agrees with them in their general features.

While the proposed bill may not cover all the points that it may be found advisable to regulate, yet its passage will be of benefit to the public, and the law can be amended and perfected, should its practical workings reveal any defects not now forseen.

The full text of the proposed bill will be found in another column.

IN this number we publish a copy of the Bill now before Congress for providing for the securing of plans for the United States public buildings. It shows itself throughout as a very complete and satisfactory document—the only point in which possibly it might be improved being in the doing away of the restriction of the competition to five

architects, debarring others from entering into the competition. It is well to select five and pay them, but do not confine the limit of choice to them, but have it open to all having the stated qualifications.

This may be of great advantage in some cases. Suppose that among the five architects chosen by the Commissioners there should happen to be no local architect who would, it would be presumed, know more about the wants of the locality, natural phenomena of the site, harmony with the buildings of the vicinity and such other matters as would not occur so well to an architect at a distance—it would give a chance then for the people to obtain possibly a better building than under the proposed restricted arrangement of the bill, and it would inure to no one's disadvantage.

If the Commissioners should find that among the outsiders a better plan could be obtained it would be its duty to select the same—and it may be considered as certain that the five picked architects would be glad to gracefully retire if such should happen to be the case.

AN ACT TO REGULATE THE PRACTICE OF ARCHITECTURE.

FORMULATED BY THE SAN FRANCISCO AND THE SOUTHERN CALIFORNIA CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE people of the State of California, represented in Senate and Assembly, do enact as follows:

SEC. 1.—Within sixty days from and after the passage of this Act the Governor of the State shall appoint ten persons, which persons so appointed shall constitute a Board, which Board shall be known and designated as the State Board of Architecture.

Five members of said Board of Architecture shall be residents of the Northern United States Judicial District of California, and shall constitute the Northern District Board for the examination of applicants for licenses to practice Architecture in this State. And five members of said Board shall be appointed from the Southern United States Judicial District of California, and shall constitute the Southern District Board for the examination of applicants for licenses to practice Architecture in this State.

The Districts shall be the same as the Northern and Southern United States Judicial Districts of this State at the time of the passage of this Act.

Said State Board of Architecture shall be appointed by the Governor as follows: Three members shall be appointed from the members in good standing of the San Francisco Chapter of the American Institute of Architects, two of whom shall be designated to hold office for two years. Three members shall be appointed from the members of the Southern California Chapter of the American Institute of Architects, two of whom shall be designated to hold office for two years; one member shall be appointed from the faculty of the State University at Berkeley, one member shall be appointed from the Teachers of the State Normal School at Los Angeles, and two members, one of whom shall be a resident of the Northern District and one a resident of the Southern District, who shall be lawyers in good standing, and who shall have been in practice for not less than five years.

Each person so appointed shall hold office for four years, unless so designated to hold office for two years And thereafter, upon the expiration of the term of office of the persons so appointed, the Governor of the State shall appoint a successor or successors to such outgoing person or persons whose term of office shall have expired, to hold office for four years, provided that the membership of the State Board of Architecture shall be composed as herein set forth.

Each member shall hold over after the expiration of his term of office until his successor shall have been duly appointed and qualified.

Any vacancy occurring in the membership of the Board shall be filled by the Governor of the State for the balance of the unexpired term in like manner.

The members of the Board shall serve without compensation from the State.

The expenses of said Board shall be paid out of the fees collected from applicants for licenses.

SEC. 2.—The members of the State Board of Architecture shall, before entering upon the discharge of the duties of their office, take and file with the Secretary of State the constitutional oath of office.

The said State Board of Architecture shall, within thirty days from and after their appointment, meet and elect from their number a President and a Vice-President, one of whom shall be a resident of the Northern District, and one a resident of the Southern District; and two Secretaries, one from each district. The Secretaries shall also act as Treasurers. The person receiving the highest number of votes shall be entitled to be Secretary, and the person receiving the next highest number of votes, be assistant Secretary. Said persons shall hold office for two years, or until their successors shall have been duly elected and qualified.

SEC. 3. The Board may adopt rules and regulations for the government of its proceedings, not inconsistent with this Act.

The State Board shall adopt a seal for its own use, and one for each of the District Boards. The seal used by the Northern District Board shall have the words "Northern District" inscribed thereon, and the one for the Southern District shall have the words "Southern District" inscribed thereon, and the Secretary and Assistant Secretary shall have charge, care and custody thereof.

The Secretary shall keep a correct record of all the proceedings of the Board, which shall be opened to public examination at all times. Six members shall constitute a quorum for the transaction of business of the State Board of Architecture, and three members shall constitute a quorum of the District Boards for the transaction of business.

Special meetings of the State Board of Architecture shall be called by the Secretary upon the written request of four of its members, and by giving twenty days written notice of such meeting, and the time and place at which such meeting is to be held, to each member of the Board.

The District Boards shall call special meetings upon the written request of two of its members made to the Secretary, and upon five day's written notice to each member of such District Board.

Within thirty days from and after the date of their appointment, the State Board shall meet to organize, elect officers, as in this Act provided for, and formulate and adopt a code of rules and regulations for its government in the examina-

tion of applicants for license to practice Architecture in this State; and such other rules and regulations as may be necessary and proper, not inconsistent with this Act. The Board may, from time to time, repeal or modify its rules and regulations, not inconsistent with this Act.

The State Board shall meet annually on the second Tuesday in April, for the purpose of transacting such business as may lawfully come before it, not inconsistent with this Act.

The District Boards shall hold their regular meetings for the examination of applicants for licenses to practice Architecture, on the last Tuesday of January, April, July and October of each year.

The Board of the Northern District shall meet in the rooms of the San Francisco Chapter of the American Institute of Architects in San Francisco; and the Board of the Southern District shall meet in the rooms of the Southern California Chapter of the American Institute of Architects in Los Angeles, and at such other times and places as they may elect, to examine applicants for licenses.

Any person shall be entitled to an examination for a license to practice Architecture upon payment to the District Board when he makes application, of a fee of fifteen dollars, which fee shall be retained by the Board; should the applicant pass a satisfactory examination by said District Board, the Secretary shall, upon the payment to him of a further fee of five dollars, issue to the applicant a certificate, signed by the President and Secretary, sealed with the seal of the District Board, and directed to the Secretary of State, setting forth the fact that the person therein named has passed a satisfactory examination, and that such person is entitled to a license to practice Architecture in this State, in accordance with the provisions of this Act; and upon the payment to the Secretary of State of a fee of five dollars, the Secretary shall at once issue to the person therein named a license to practice Architecture in this State in accordance with the provisions of this Act, which license shall contain the full name of the applicant, his birth place and age, together with the name of the District Board issuing the certificate, and date of issuance thereof. All papers received by the Secretary of State on application for license, shall be kept on file in his office, and a proper index and record thereof shall be kept by him.

SEC. 4. Any Architect in good standing, who shall show to the satisfaction of the District Board, of the District in which such Architect may reside, that he was engaged exclusively in the practice of the profession of Architecture on the date of the passage of this Act, shall be granted a Certificate without passing an examination, on the payment to the District Board of a fee of five dollars, provided such application shall be made within six months from and after the passage of this Act.

Said certificate shall set forth the fact that the person to whom the same was issued, was practicing Architecture in this State at the time of the passage of this Act, and that the person therein named is entitled to a license to practice Architecture, without having to pass an examination by the District Board, and the Secretary of State shall, upon the payment to him of a fee of five dollars, issue to the person named therein, a license to practice Architecture in this State in accordance with the provisions of this Act.

Each licensed Architect shall have his license recorded in the office of the County Recorder in each and every County in this State in which the holder thereof shall practice, and he shall pay to the Recorder the same fee as is charged for the recording of deeds. A failure to have his license so recorded shall be deemed sufficient cause for revocation of such license.

SEC. 5. Within six months from and after the passage of this Act, it shall be unlawful, and it shall be a misdemeanor, punishable by fine of not less than fifty dollars nor more than five hundred dollars, for any person to practice Architecture without a license in this State, or to advertise or put out any sign or card, or other device which might indicate to the public that he was an Architect.

Provided, that nothing in this Act shall prevent any person from making plans for his own buildings, nor furnishing plans or other data for buildings for other persons; provided the person so furnishing such plans, or data, shall fully inform the person for whom such plans or data are furnished, that he, the person furnishing such plans, is not a licensed Architect; and provided further, that the person so furnishing plans or other data for building shall not be entitled to recover any fee or compensation for such plans, data or services.

Architect's licenses issued in accordance with the provisions of this Act, shall remain in full force until revoked for cause, as hereinafter provided for in this Act.

A license may be revoked for dishonest practices, or for gross incompetency in the practice of the profession, which questions shall be determined by the District Board of the District in which the person whose license is called in question shall reside, or shall be doing business; and upon a full investigation of the charges by the District Board, an opportunity having been given the accused to be heard in his own defense or by counsel; and upon the verdict of at least four members of the District Board, the Board may issue its certificate to the Secretary of State, revoking the license of the person accused; and the Secretary of State shall thereupon cancel such license. And on the cancellation of such license, it shall be the duty of the Secretary of the District Board to give notice of such cancellation to the County Recorder of each County in this State, whereupon the Recorder shall mark the license recorded in his office, "Cancelled".

After the expiration of six months, the person whose license was revoked, may have a new license issued to him by the Secretary of State upon the certificate of the District Board, by which the license was revoked.

Every licensed Architect shall have a seal, the impression of which must contain the name of the Architect, his place of business, and the words "Licensed Architect", with which he may stamp all plans prepared by him.

This Act shall take effect from and after its passage.

THE GOVERNMENT BUILDINGS BILL.

WE publish herewith a copy of the Bill relating to the re-organization of the Government Architects' office, which was introduced into the House of Representatives by Mr. McKaig, and into the Senate by Senator Brice, say the *American Architect*, under the following circumstances:

This Bill originated with a few architects in New York City, who happened to learn that notwithstanding the controversy between Secretary Carlisle and the American Institute of Architects, the Treasury Department was anxious to reorganize the Supervising Architect's office, and to have a bill introduced to this effect, because of the many objection-

able and illegal features of previous bills—notably the "Tarsney Bill"—which made them undesirable as well as inoperative.

The "McKaig Bill," which was draughted by Mr. George B. Post, of New York, in consultation with these New York architects and with the Treasury Department, embodies an entirely new idea which is based on the very satisfactory lines under which a number of Government Departments—notably the Light-house Department—have been conducted most successfully for a number of years; by placing the initiative and professional work under the management of an expert board, of the highest standing, under whose direction the work would be distributed for the best advantage of the country, of the work, and of the profession; leaving the administrative work in the hands of the Government, where it belongs.

The Bill, as originally draughted, was revised a number of times, by the Committee of Architects on the one hand, and by the Treasury Department on the other, and as introduced was entirely satisfactory to all parties concerned. Though many of the minor details may not apply to individual cases in individual sections of the country, they had to be adjusted so as to cover the entire territory, and also so as to meet administrative, legal and other objections not generally appreciated by the profession at large. The powers of the Commission are such as to enable them to modify their details from time to time, as they find it necessary and wise.

The principle of the Bill, namely, the instituting a Commission of high character to have charge of the architectural work of the Government, and to distribute the work amongst the most skillful architects in the country, is unquestionably a correct one.

The Bill has received the approval of the Secretary of the Treasury. It has passed the Committee on Public Buildings and Grounds, of the House, whose indorsement could not be stronger, and the Bill is now regularly before the House. Owing to its introduction at the end of the last session of Congress, at a time when the House was entirely absorbed by the Tariff revision, it was impossible to have a day set for its consideration and passage; therefore it had to go over to the present session of Congress.

In the House Committee's report to the House, recommending the passage of the Bill, they state, among other things:

"Your committee do not believe that the beneficial results that should be obtained, are obtained under the existing methods of planning and constructing public buildings of the United States.

"While the employment of the best artistic thought, and best and most approved systems of construction and equipment ought to be represented in the public edifices of this great nation, the contrary of these propositions is the result obtained under existing methods.

"Your Committee are advised that the best and highest types of artistic thought and architectural skill in European countries is found in the Government buildings of those countries, while in this country the reverse is the rule, and superiority of architectural design is represented in State, Municipal and private buildings, and not those erected by the General Government.

"A comparison of modern buildings, erected by private citizens and corporations, with those belonging to the Government of the United States, will show, as to the former, constant progress in construction and artistic expression, and continual increase in economy of construction, while in the case of the buildings of the United States there has been but little, if any, advancement. The buildings constructed recently by the United States, as compared with those constructed a quarter of a century ago, show a marked deterioration of artistic quality. The cost has been, relatively and positively, much greater that those of private buildings of the best type.

"Your Committee has been furnished reliable and trustworthy information and data, showing the cost of the best type of buildings constructed for States, municipalities, corporations and private citizens, ranges 38 to 50 cents per cubic foot of space, while the cost of buildings constructed by the United States ranges from 50 cents to $1.00 per cubic foot." * * *

"The conditions and results which your Committee thus call to your attention, necessarily follow the methods and practices now employed by the Government." * *

"It now transpires that the time of the Supervising Architect is wholly employed in matters of administrative detail, and the architectural work of the office, the plans, designs and specifications, are prepared by mere copyists—cheap clerks." * * *

After entering elaborately into the present duties of the Supervising Architect, and showing the physical impossibility for one man to find any time for designing, the Report continues:

"The Supervising Architect rarely sees one of these buildings while in course of construction. Its construction is generally under the supervision of some local carpenter or builder, who never made any pretense to architectural knowledge or study; whose appointment was secured not because of his skill, but because of the political influence he could marshal, and whose greatest solicitude is to prolong the tenure of his employment by delaying the completion of the work." * * *

"A building, which, if the property of a private citizen would be constructed in months, when erected by the Government requires years for its completion. * * A public building at Detroit, Mich., where the construction was authorized eleven years ago, and $1,300,000 appropriated by Congress years since, the foundation-walls are not yet completed.

"Indeed, the abuses in the method above refetred to, have become so serious that the Committee cannot conscientiously recommend public buildings at many places where the economical and convenient transaction of the business would require or justify such buildings could they be provided at a cost not greatly exceeding the necessary expenditure by a private owner for similar purposes.

"Of the Bills reported from this Committee during the present session, many are so reported only under the assumption that the buildings contemplated can be erected under some plan less wasteful than now in operation.

"The scope and purpose of the measure herewith presented is designed to remedy the many evils herein pointed out. To give to the country a better type of architecture in its buildings, and to stop the wasteful extravagance which is the necessary result of the present methods." * *

"The measure does not abrogate or take from the Supervising Architect any of the functions or authority belonging to the office, which, under existing conditions, *he is capable of performing*. He will remain and continue the representative of the Government, and perform all the duties that now pertain to his office, excepting the designing and preparation

of drawings and specifications for such buildings, and the local supervision shall be subject to his approval." * *

"In fact, this measure is intended to make him what the title of his office indicates, the Supervisor of Architects; not the Government's architect, but the supervisor of the architects of the Government's works. Therefore, your Committee recommend the passage of the Bill."

In the Senate, the Bill was introduced in the Senate and referred to the Committee on Public Buildings and Grounds too late for its consideration, and has not yet been reported upon by this Committee.

To summarize: *In the House*, the Bill is regularly before the House, and as soon as a day can be set for the discussion of the same, it can be passed. *In the Senate*, the Bill is before the Committee, and as soon as it can be reported to the Senate and a day set for its discussion, it can be passed.

The Bill has received the approval of the Committee of the House, of the Secretary of the Treasury, of the Press, and of the profession. It has been before the profession for nearly a year. Numerous meetings of different professional societies and notably of the American Institute of Architects have taken place in the meanwhile, and its endorsement has been unanimous. Many Senators and Congressmen have been seen individually, and without exception have commended the Bill, and promised their support; many of them in writing. Up to the present date there has not been a single objection raised to the Bill, by the Public, by the Government, by the Representatives of the Government in the Senate or House, or by the profession; on the contrary, it has received the most positive and hearty endorsement.

The Bill should pass both Houses with little or no trouble, because:

1. It is purely administrative in its character.

2. Its object is to correct an inefficient system which was instituted years ago, and which has become not only obsolete, but positively pernicious.

3. It does not interfere with the present system, in so far as that system is efficient, but tends to relieve the present system of a burden to which it is not equal, and to enact proper measures to provide for this part of the work.

4. It asks for no appropriations or expenditure of money, but aims on the contrary, to effect economy in the expenditure of the moneys, and to raise the character of the work to the highest standard of the present age.

5. In raising the standard of the work, it will raise the standard of the art, create new incentive, bring forth new men, new opportunities, and result in covering this country with monuments which will eventually compare with those of other countries, and in time, perhaps, excel them.

6. It has received the hearty approval of everybody concerned or interested, on whichever side of the question they may be.

7. It will not legislate out of office any of the present office-holders—many of whom have served the Government faithfully for many years—because the work now in hand under the present system, and the maintenance of the buildings now completed, will demand the services of this force for many years to come, and it only applies to future work.

8. It will relieve the Secretary of the Treasury of all work of an expert character, for which he must necessarily depend upon outside advice, by placing at his disposal in this connection, an expert Board of the highest standing.

9. Not only will the buildings be equal to the best types that are erected in the United States, both artistically and constructively, but they will be built, as stated by the Committee of the House, at a saving of at least 30 per cent on the actual cost of construction, at least three years in the time of construction, saving not only the interest on the cost of the land and the cost of construction, besides salaries of superintendents, watchmen, etc., during this period—the cost of repairs and maintenance due to suspension of the work, but also three year's rent for temporary quarters pending completion of buildings.

10. It can be demonstrated by figures that under the new Bill, with better buildings, erected in a much shorter time, the cost of the construction of the buildings, the commissions of the architects, and the necessary appropriation for the Supervising Architect's office, the United States Government would save at least one million dollars per annum, as compared with the present system.

J. M. CARRERE, *Secretary*.

By order of the Legislative Committee on Government Architecture:—

Permanent Committee: Bruce Price, *Chairman;* Ed. H. Kendall; John M. Carrere, *Secretary*.

Advisory Committee: R. M. Hunt, *Chairman;* Chas. F. McKim and Geo. B. Post.

A BILL TO PROVIDE FOR THE SECURING OF PLANS AND FOR THE ERECTION OF THE PUBLIC BUILDINGS OF THE UNITED STATES.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President, by and with the advice and consent of the Senate, shall appoint a commission on public architecture consisting of three architects of high scientific and artistic attainment and large practical experience, and two officers of the Engineer Corps of the United States Army. If necessary, a separate appointment of any or all of three members of the commission who are architects may be made for each building under consideration, and members of the commission for one building may act upon other buildings. That the commission, under the general direction of the Secretary of the Treasury, shall discharge all the administrative duties relating to the procuring of designs and the appointing of architects for all buildings hereafter erected by the Government of the United States.

SECTION 2. That the Secretary of the Treasury shall be the president of the commission *ex officio*, and the Supervising Architect of the Treasury Department shall be a member of the commission *ex officio*. In the absence of the president of the commission, one of the members shall be elected as chairman by ballot, and he shall preside at the meetings and perform such other duties as the rules of the commission may prescribe; and the Supervising Architect of the Treasury shall act as secretary of the commission.

SEC. 3. That the secretary of the Treasury shall convene the commission whenever, in his judgment, the exigencies of the service require it.

SEC. 4 That the commission shall adopt rules and regulations governing competition in the procuring of designs, and for the government of its meetings and the general performance of its duties. The members of the commission shall be paid their actual expenses and subsistence and a *per diem* allowance of $10 while actually engaged in the performance of their official duties, but no *per diam* allowance or salary shall be allowed to any civil or military officer on account of his being employed on the commission, but his actual traveling expenses and subsistence shall be paid while engaged thereon.

SEC. 5. That in case the limit of cost provided by law is $100,000 or over, the commission shall select by ballot, for

each building, five architects to prepare designs in competition; in case the limit of cost is less than $100,000, the commission may, in its discretion, select by ballot an architect without competition. No architect shall be eligible for entering as a competitor, or for appointment, who has not had at least ten years' experience as an architect-in-chief, and unless he can satisfy the commission, through work already done by him, or otherwise, that he is competent to take charge of the economical construction of the building. The commission shall cause to be made and issued to competing architects, surveys, schedules of requirements for the building, limitations of cost, and all facts which might control or influence the character of the required design. The commission shall specify the number and character of the drawings required, and fix a definite time for their completion. The Secretary of the Treasury, upon the recommendation of the commission, shall pay to each unsuccessful competitor, to reimburse him for expenses incurred in preparing the competitive drawings, the following amounts: For designs for buildings to cost not more than $150,000, the sum of $150, and for each and every $100,000 of the limit of cost of the building above that amount, the additional sum of $100; but in no case shall more than $1,000 be paid to any unsuccessful competitor.

Sec. 6. That the commission shall reject and return to the author any drawings which have failed to exactly comply with the requirements and regulations adopted by the commission for the competition, and no compensation for their preparation shall be paid, and the author thereof shall be debarred from all further participation in the competition. The commission shall carefully examine the drawings of each competitor in competition and shall select one design as the design of the proposed building, and shall recommend its author as the architect for that building and return forthwith all other drawings to their authors. The Secretary of the Treasury shall thereupon appoint the architect so recommended and he shall perform all the customary duties performed by an architect in private practice, namely: The making of all preliminary sketches, the modification of his designs to meet possible requirements of the commission, the preparation of a set of general working-drawings to procure estimates; the preparation of a set of general details on a large scale, a set of full-size drawings for moulded, carved or ornamental work, and a set of all other original drawings and specifications required by the commission. He shall supervise the construction of the building, and no payment shall be made to any contractor until the certificate of the architect has been received by the Secretary of the Treasury that the work has been executed in conformity with the contract. He shall file a complete set of the construction drawings in the Treasury Department, from which all duplicates shall be paid for out of the appropriation for the building. The architect shall be paid for his services a fee of five per centum upon the total cost of the work and the usual traveling expenses. The expenses of the commission and the fees of the architect shall be paid by the Secretary of the Treasury out of the appropriation for the building in the erection of which they were incurred.

Sec. 7. That the Secretary of the Treasury, upon the recommendation of the commission, shall authorize the architect to employ a competent clerk-of-the-works, at a salary to be established by the commission, and he shall be paid for his services out of the appropriation for the building.

Sec. 8. That the Supervising Architect of the Treasury Department, under the direction of the Secretary of the Treasury, shall be the representative of the Government in all matters connected with the erection and completion of public buildings and the payment therefor. He shall receive proposals for the work, and, with the approval of the architect of the building, he shall award the contracts therefor. He shall perform all other duties that now pertain to his office, except such duties as are vested by this Act in the architect of the building.

Sec. 9. That all Acts and parts of Acts inconsistent with this Act are hereby repealed.

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

PERSPECTIVE view of residence, Geo. W. Payne & Sons Architects, Carthage, Ill.

SCHOOL House in Alameda, W. H. Armitage, Architect, San Francisco.

COMPETITIVE Design N. S. G. W. Building, Shea & Shea Architects.

THREE flats, Oak and Laguna streets, Shea & Shea Architects.

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. — Geo W. Percy, Vice-Pres.
Oliver Everett, Sec. — John M. Curtis, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. — Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. — W. C. Ralston, Treas.

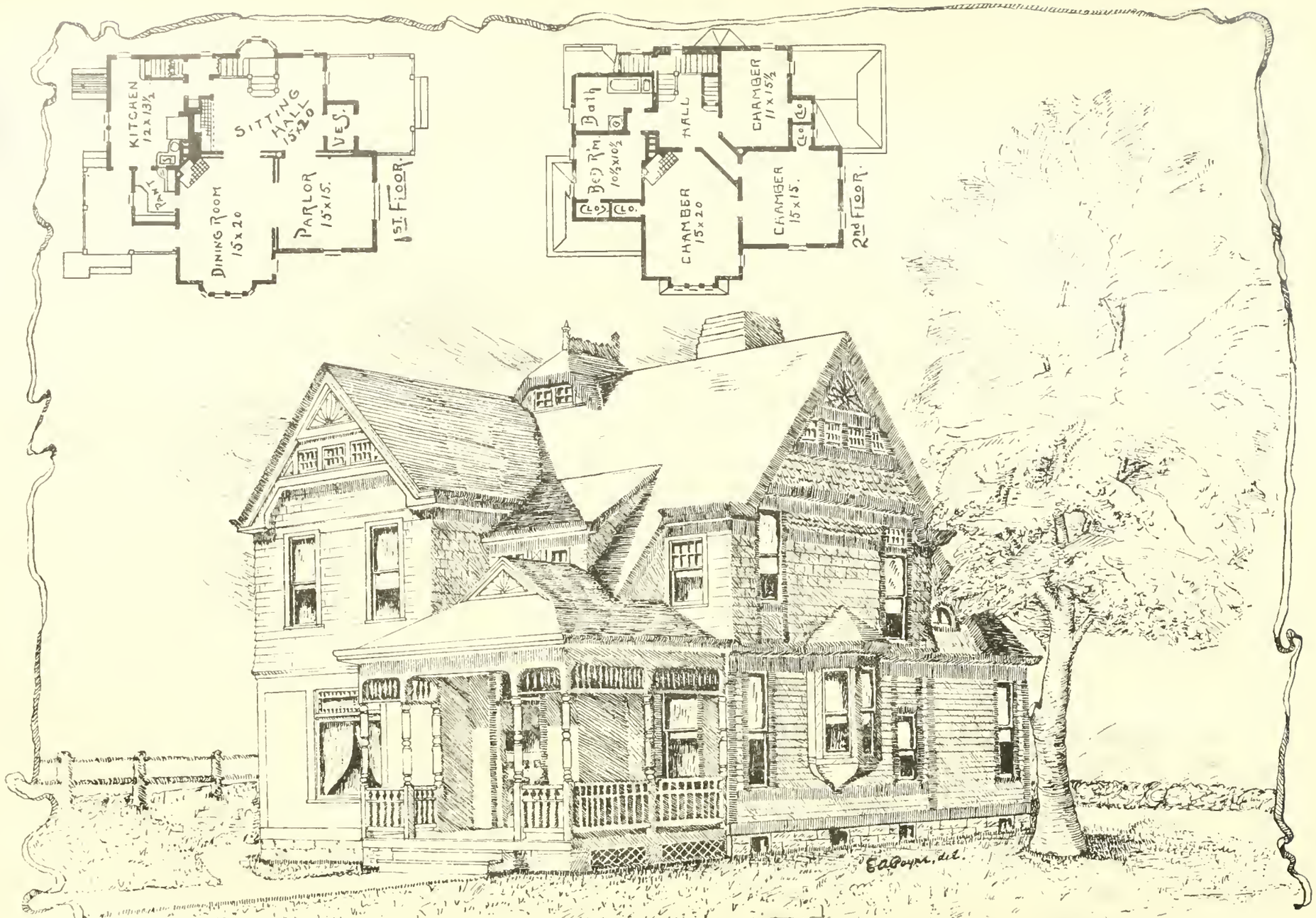
California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. — C. O. Poole, Vice-Pres.
Max Caspari, Sec. — H. T. Bestor, Treas.

The Editor is not responsible for any opinions of Correspondents.

To the Editor of the California Architect and Building News.

IN looking over the proposed Bill for regulating the practice of architects there are quite a number of things that deserve consideration and wherein it appears to me that it might be improved.

1st. In the composition of the Board it is unwise to limit



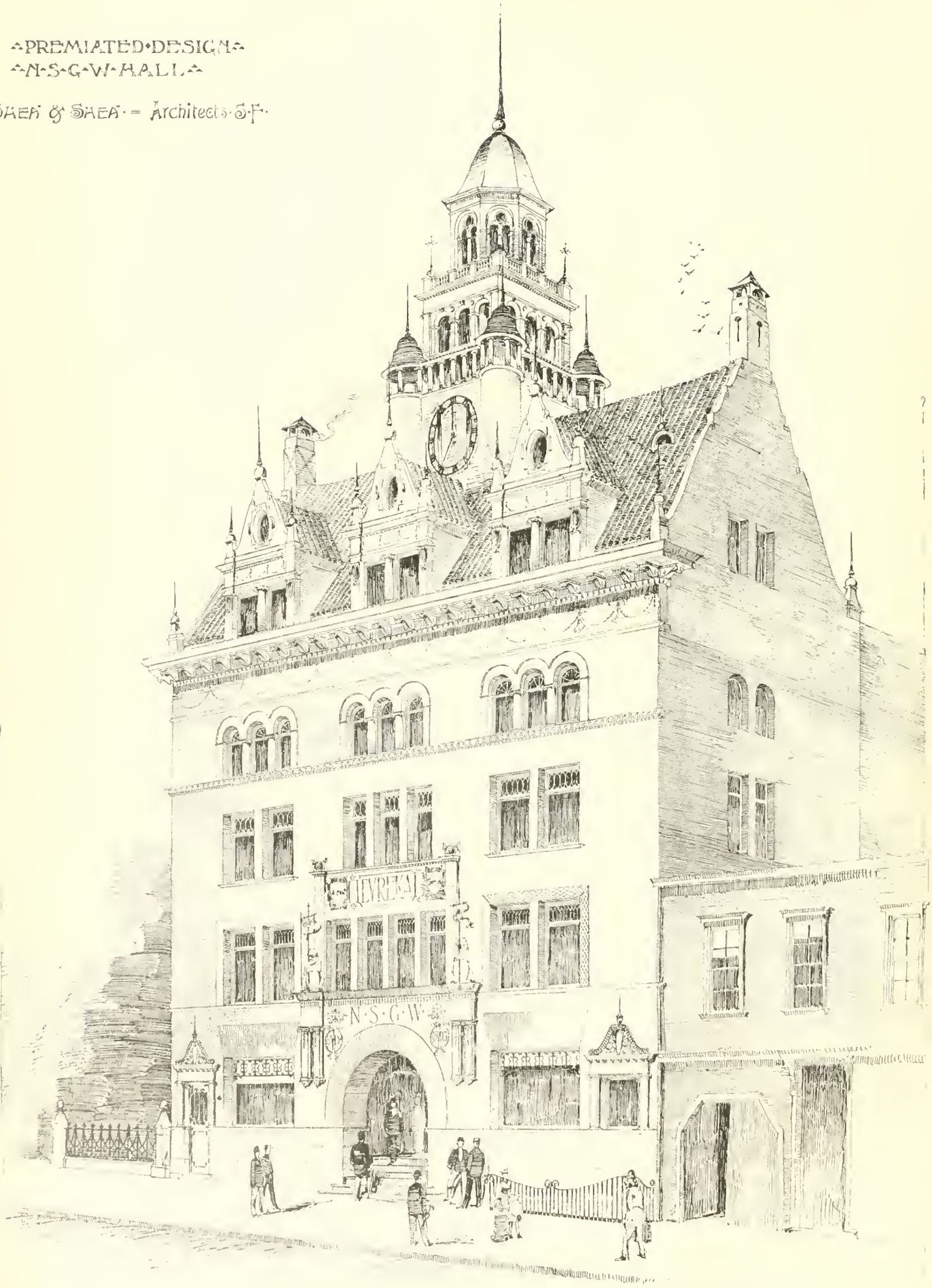
GEO. W. PAYNE & SON.
ARCHITECTS.
CARTHAGE, ILL.

VIEW.

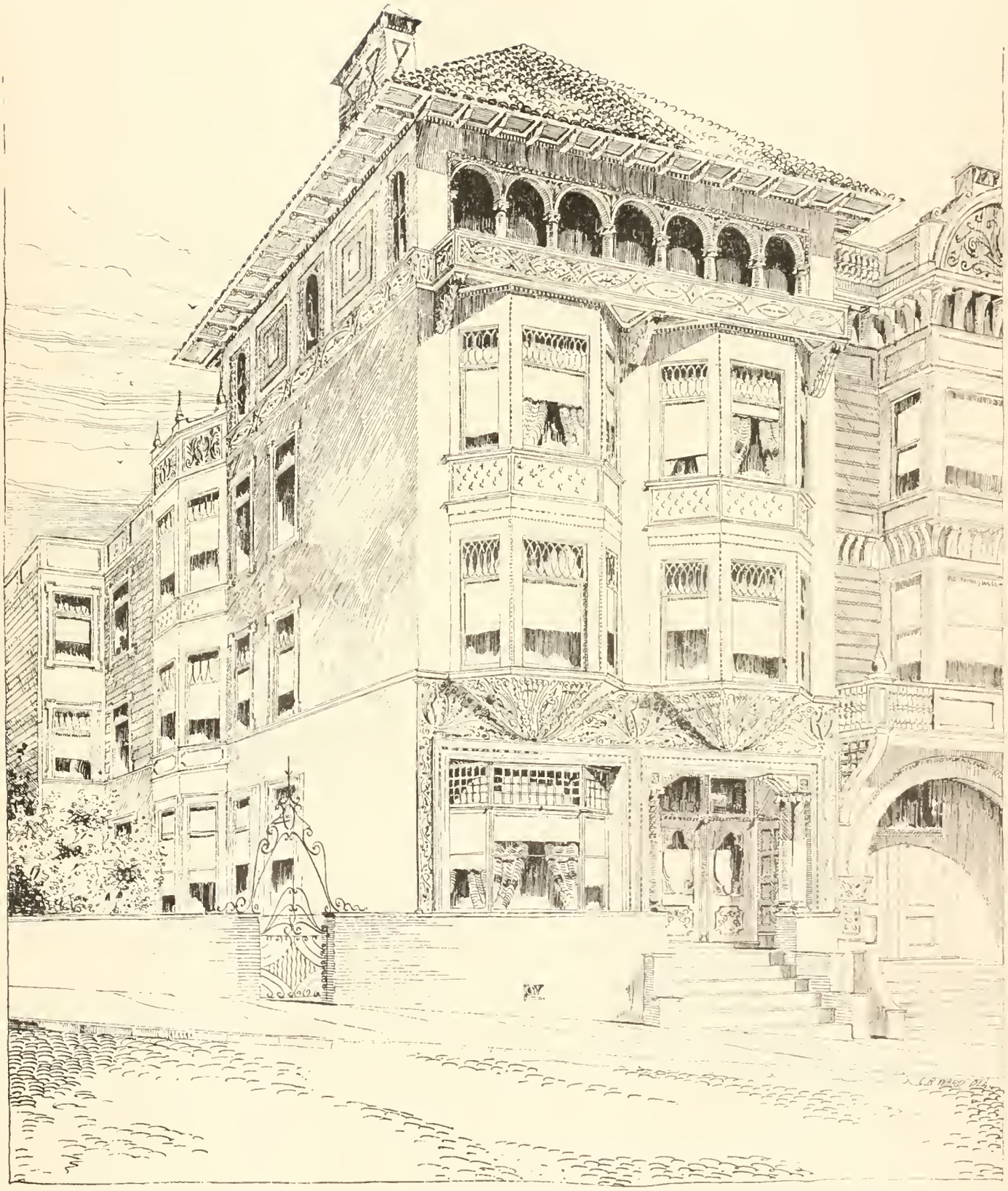
BRITTON & REY PHOTO LITH.

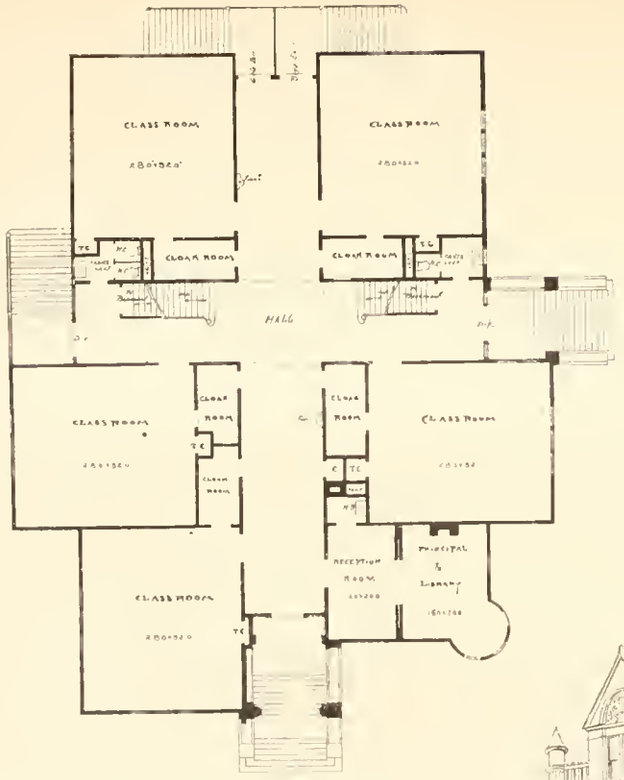
PREMIATED DESIGN
N·S·G·W· HALL

SHEA & SHEA = Architects S·F·

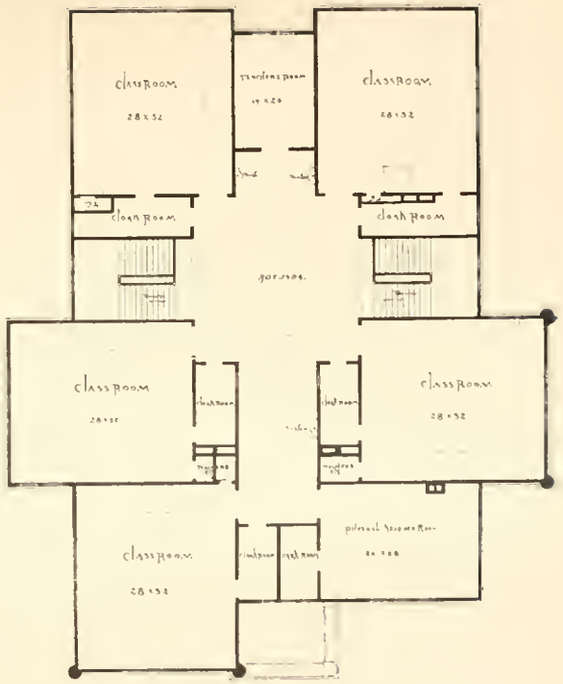


THREE FLATS FOR
MR. J. M. GOEWEY
OAK & LAGUNA STS. S.F.
SHEA & SHEA ARCH'TS





FIRST FLOOR PLAN



SECOND FLOOR PLAN

WILLIAM H. ARMITAGE, ARCHT.
319-321 PHELAN BUILD'G S.F.

the examining architects to members of the Chapter of the American Institute of Architects—until such Chapters themselves have a more strict examination into the merits of their own members—if such members had to pass an examination themselves before becoming such they would then have a certain standing in the examination of others, and to commence this matter right such should be the case.

The other members of the board have no *raison d'etre*. If there were Professors of Architecture at the Berkeley or Stanford University I should say let thom be on the Board, otherwise have no professors. The lawyers are certainly out of place—might with just as much reason put architects on the Board of Examiners for Law Students. If they are put their for legal advice make them such but to have no voice in the examination or other actions of the Board.

2d. It would seem that semi-annual examinations would be sufficient—instead of quarterly.

3d. Although naturally the most likely place to hold the examinations would be at the rooms of the Chapter, still I believe it would be better to leave such a small matter as this in the hands of the examiners themselves and not bind them down to certain locations.

4th. The clause calling for an architect to record his license in every County in which he may practice gives him needless trouble. It seems to me quite sufficient for all practical purposes to have his license recorded in the County wherein is his principal place of business—and when he has to lose his license because of his forgetfulness in omitting to record it in the County where he may be architect for some little summer cottage—the punishment hardly fits the crime.

5th. In the case of such a serious matter as the Revocation of an Architects' License for dishonest practices or gross incompetency—it should be left to the *State Board* to decide—as in a case of any local prejudice, such prejudice would not so likely get in its work as if the trial should be left to the *District Board* of the District in which the accused practices, if it needs must be decided by a District Board let the Board of the other District take the case up.

These few criticisms I make in the best of spirit and hope they may tend to improve the proposed bill.

Yours, etc., W. J. C.

WASHINGTON STATE CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

IN the latter part of March, 1894, several architects of the State of Washington, believing that the time was ripe for the formation of a Chapter of Architects, met in the office of one of their number and considered the feasibility of such organization.

At an adjourned meeting held in April with enthusiasm, the Chapter was born and a Constitution and By-Laws adopted; officers for the current year, and to serve until the annual meeting in January, 1895, were elected; May 10th, at Tacoma, the organization was ratified and perfected. A Charter was granted by the American Institute, and the Washington State Chapter of the American Institute of Architects was full fledged. A series of amendments to the Constitution and By-Laws in harmony with those of the Institute have accordingly been proposed and submitted to the members for their consideration.

Meetings, with good attendance, have been held regularly on the second and last Thursdays of each month, with the exception of the months of November and December.

The Chapter has kept constantly in mind the importance of interesting the general public in Art and Professional practice. Special papers have been prepared and read at several of the meetings which were held at the Chamber of Commerce in Seattle and City Council Chamber in Tacoma, and subjects of general interest discussed.

The first paper read was "Venice, its Color and Line" by Mr. Willcox, April 12th, then followed, successively, a timely paper on "Competitions" by Mr. Bebb, April 26th; "Architects as Pioneers" by Mr. Bullard, May 10th; President Boone's "Address" May 10th; "The Ethics of the Profession" by Mr. Evers, June 14th; "How to Hake Home Beautiful" by Mr. Willcox, June 28th; "Abuses in the Office of the Supervising Architect of the Treasury" by Mr. Willcox, July 15th; "Testing of Piles" by Mr. Bebb, August 26th; "Laying out of Cities" by Mr. Willcox, August 26; "Fire Proof Construction" by Mr. Bebb, September 13th; "Errors in House Construction" by Mr. Willcox, November 9th; "Building Materials of the Puget Sound Country" by Mr. Talcott, December 11th; with one yet to be read "On the Architect as a Limited Agent" by Mr. Saunders.

The Council believes it is a matter of congratulation, that, with a practicing membership of Thirty-four, with Three Honorary Members, or a roll of membership of Thirty-seven members, this, the youngest Chapter in the United States, save one, we now rank Sixth in a list of twenty-six or more Chapters, and we believe also that as the Society increases in influence, it will serve to a corresponding advantage of its members in many practical ways.

LIST OF OFFICERS AND MEMBERS OF THE WASHINGTON STATE CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

W. E. Boone, Seattle, Wash., President; G. W. Bullard, Tacoma, Wash., 1st Vice-President; William H. Willcox, Seattle, Wash., 2d Vice-President; Charles W. Saunders, Seattle, Wash., Secretary; Cecil S. Evers, Seattle, Wash., Treasurer.

MEMBERS OF THE COUNCIL.

Officers of the Chapter (Ex-officio) and Wm. Farrell, Tacomo, Wash.; Albert Sutton, Tacoma, Wash.

HONORARY MEMBERS.

Prof. J. M. Taylor, University of Washington; Chas. L. Denny, Seattle, Wash.; A. W. Conant, Seattle, Wash.

COMPLETE LIST OF MEMBERS.

Chas. H. Bebb, W. E. Boone, A. B. Chamberlin, A. W. Conant, Chas. L. Denny, Cecil C. Evers; A. V. Hector, E. W. Hooper, E. W. Houghton, T. Josenhans, Emil de Neuf, Chas. W. Saunders, Carl Siebrand, H. Steinmann, Jas. Stephen, Prof. J. M. Taylor, A. Wickersham, Wm. H. Willcox, Seattle, Wash.; G. W. Bullard, C. A. Darmer, Wm. Farrell, L. C. Houser, Louis Mendel, R. L. Robertson, A. J. Russell, Albert Sutton, Chas. B. Talbot, Tacoma, Wash.; L. M. Boardman, Mr. Cutter, John K. Dow, Mr. Malmgren, H. Prousse, L. L. Rand, Spokane, Wash.; H. L. Copeland, Olympia, Wash.; C. Ferris White, Everett, Wash.; John Parkinson, Los Angeles, Cal.; G. H. Parks, Kansas City Mo.

THE FIRST ANNUAL MEETING.

The first annual meeting of the American Institute of Architects, which was held at the Chambers of Com-

merce rooms yesterday, brought out quite a gathering, and developed the fact that the Chapter stands sixth in the United States in the number of members. A petition to the Regents of the State University for the establishment of a Chair of Architecture and the Building Arts was adopted and a valuable report on the building materials of the state was presented. A pleasant interruption in the proceedings occured when the Chapter paid a visit to the Denny Clay Company's works at Van Asselt on a special train, as the guests of the company.

The meeting was delayed by the failure of the members from Tacoma to arrive at the appointed time, which was 10:30, and the assemblage was not called to order till 11:30 by President Boone. Those present were: George W. Bullard, William Farrell, Albert Sutton and H. A. Russell, of Tacoma; Charles H. Babb, A. B. Chamberlain, C. C. Evers, C. W. Hooper E. W. Hampton, E. De Neuf, C. W. Saunders, James Stephen, William H. Willcox and A. Wickersham, of Seattle, active members, and Charles L. Denny and A. W. Conant, honorary members.

President Boone welcomed the members, and after the reading of the minutes he made the following address:

In the month of April, 1894, the first practical step in the organization of this Chapter was taken. A provisional Chaper was at that time founded. On the eleventh of May, 1894, at a meeting held in Tacoma, the work of this provisional Chapter was ratified; then Constitution and By-Laws under which it was started were adopted; and the officers chosen by it were continued as the officers of the State Chapter. This, therefore, is the first annual meeting of the Chapter. The regular monthly meetings have been held in Tacoma and Seattle alternately.

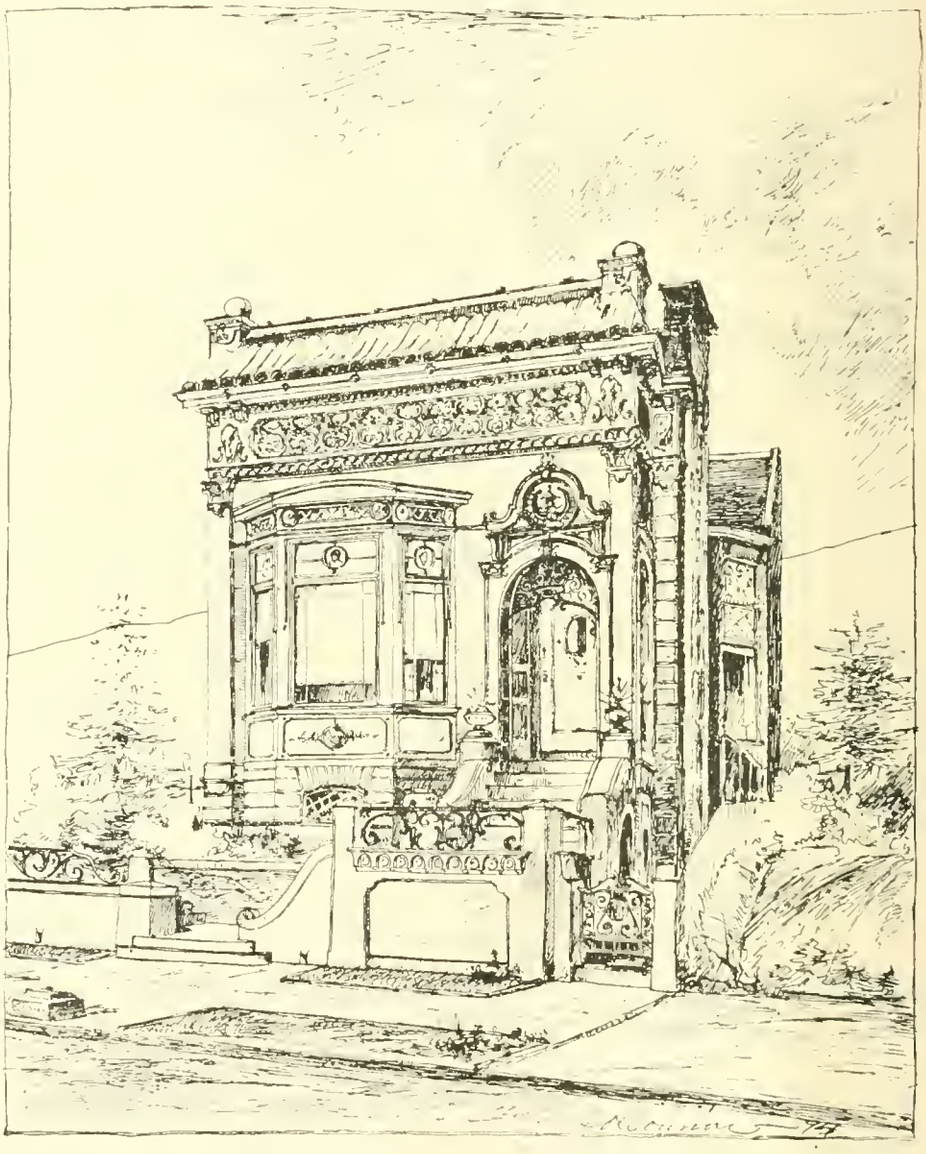
The American Institute of Architects has granted us a Charter, under the name of the "Washington State Chapter of the American Institute of Architects." This makes us an integral part of that important body; and it is surely worthy of remark that while we are probably the youngest Chapter in the United States, we rank as sixth in point of membership. This very high rank in our infancy bears striking testimony to the rapidity with which towns and cities are springing up all over this wonderful young State. If our building operations had not attained relatively gigantic proportions, we could not have so large a membership.

It affords me pleasure to say that in my opinion this Chapter has already exercised a beneficial influence upon our profession in this State. Papers of an interesting and instructive character have been read and discussed at our meetings. Men of learning, ability and experience have given us the benefit of their reflections and observations, and have thus invested our meetings with deep and practical interest.

The American Institute of Architects has for some time past made strenuous efforts to procure the adoption of improved methods in designing and constructing Government buildings. The inartistic character of these buildings in general is at first sight a reproach upon the state of architecture in the United States, and is felt by the Institute as a reflection upon the whole body of Architects.

This Chapter lost no time in seconding these efforts of the Institute, which should be encouraged and upheld wherever there is an architect who takes pride in his profession.

I recommend that as soon as practicable this Chapter take the steps necessary to the establishment of an Institute of



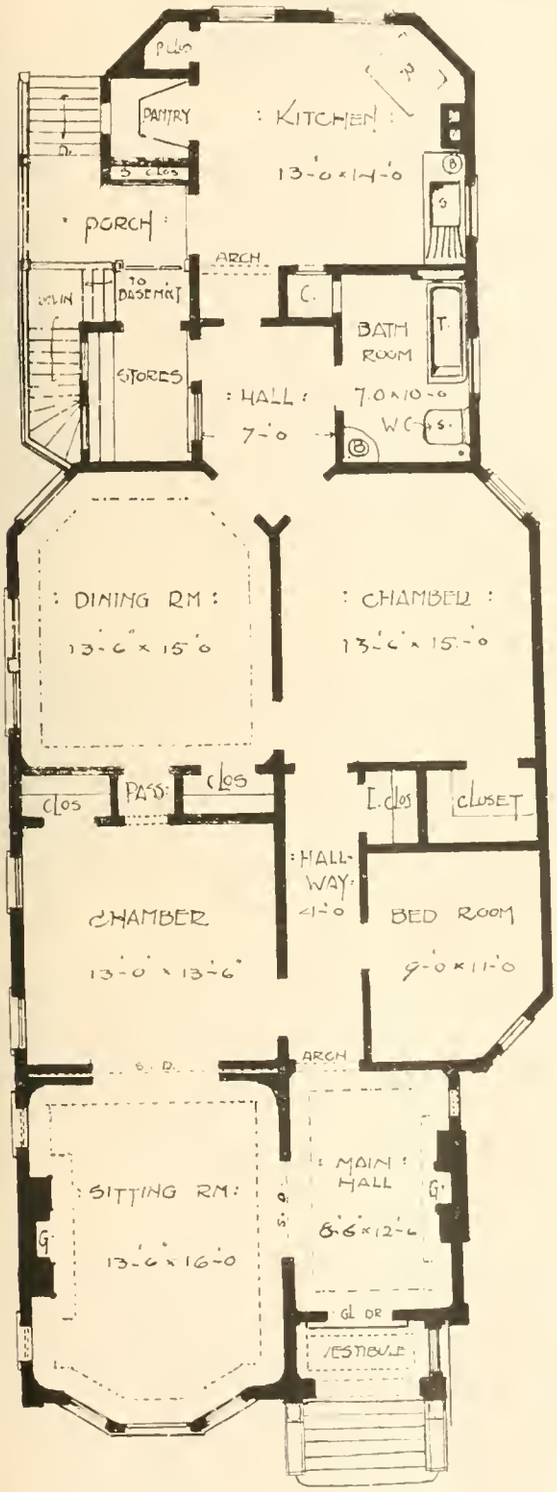
Building Arts. This can be commenced with Exhibits of building materials, which would serve effectually to bring into prominence the varied and extensive resources of the building trades in this State.

The number of applicants for instruction in architecture in the principal cities of Washington is already quite large. With the high rank in Chapter membership which has been noticed, it would seem proper that the University of Washington, whose main building is now under construction should establish a Chair of Architecture. This Chapter may appropriately aid in this matter. The State at large is deeply interested in the character and learning of the Architects who are to impress their ideas in a conspicuous way upon our growing and ambitious young cities.

I am satisfied that after due consideration the enlightened

public opinion of the State will approve the establishment of a Chair of Architecture in our new University.

There are other subjects that might be fitly discussed in your President's address; but as there is a considerable amount of business to be transacted by you at this meeting, I have thought it better to touch but lightly upon a few topics. In conclusion, I congratulate you upon the gratifying success which has attended the formation of this Chapter, and I thank you sincerely for the kindness and consideration shown to me as its first President.



The report of the Committee on Tabulation of the Building Material of the State was most exhaustive and complete in its detail and a full report of which will be published in the February issue of the CALIFORNIA ARCHITECT AND BUILDING NEWS.

A CHAIR OF ARCHITECTURE.

The committee on recommendations of the president indorsed his suggestions, and urged the Chapter to place before the Regents of the University a petition for the establishment of a Chair of Architecture.

A communication was received from the Secretary of the American Institute desiring the Chapter to use all the influence possible with the State's Senator and Representatives in Congress to secure the passage of House Bill No. 7470, which provides for a reform in the manner in which designs for Government Buildings are made and selected.

THE NEW OFFICERS.

After a short recess the Chapter proceeded to elect officers for the ensuing year. The election resulted as follows:- President, George W. Bullard, Tacoma; Vice-President; A. Wickersham, Seattle; 2d Vice-President, L. M. Boardman, Spokane; Secretary, C. W. Saunders, Seattle; Treasurer, C. C. Evers, Seattle; Council, Albert Sutton, of Tacoma, W. H. Willcox, of Seattle, and officers ex-officio.

A vote of thanks was tendered the Denny Clay Company and the Chamber of Commerce for courtesies shown.

The reading of papers was postponed till the next meeting. The Chapter adjourned at six o'clock to meet on February 14th, in Tacoma.

MEETINGS OF THE SAN FRANCISCO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

ADJOURNED and regular meetings of the San Francisco Chapter of the American Institute of Architects, were held during the past month for the consideration of the proposed Act to Regulate the Practice of Architecture in the State of California.

A committee was appointed to confer with a similar committee from the Southern California Chapter and the draft of the law which was agreed upon will be found in another column.

The Board of Freeholders now at work on the making of a New Charter for the City and County of San Francisco, were communicated with to inform them that it was the opinion of the Chapter that provision should be made for a Board of Public Works with power to formulate and enforce rules and regulations to govern the erection and alterations of buildings.

PROTECTING CANADIAN ARCHITECTS.

DOUBTLESS as the result of representations made from time to time by the architectural Associations of Ontario and Quebec, it is gratifying to learn that the Government has resolved to change the method of appraising the value of architectural plans imported for use in the erection of buildings in Canada. We are informed that new instructions have lately been issued by the Government to customs officials, under which architectural plans passing through the customs will in future be charged a duty based on the cost of the building to be erected. It has likewise been stated, though with what authority we know not, that the new regulations are to be retroactive, and that under them duty will be collected on the cost of the Ontario Legislative buildings, the Toronto Board of Trade, and other buildings erected during recent years from the plans of foreign architects.—*Canadian Architect and Builder.*

BOOKS AND PERIODICALS.

LIPPINCOTTS' Magazine for January 1895, has for its complete Novel "The Waifs of Fighting Rocks" by Captain Charles McIlvaine. The scene is laid in the mountains of West Virginia, and the tale is one of adventure, love jealousy among the mountains. "By Telephone," a stirring story by Francis Regal, shows how a plucky reporter defeated a conspiracy and brought the criminals to justice. The Christmas stories are promptly on hand for the holidays; "With the Autocrat" recalls some notable private utterances of Dr. Holmes. We always welcome the coming of this readable magazine with interest.

THE NEW SCIENCE REVIEW for January, 1895. This handsome quarterly comes to hand with its usual readable contents, J. M. Stoddart the editor appears to fulfill the promise made in the start of having a miscellany of modern thought and discovery, keeping a little ahead of his contemparies in bringing the discovery of to-day before the people in a way that cannot but please those who take an interest in Scientific Facts, without being called men of science and this class includes by far the largest number of readers. We notice that the question of "What is Electricity" is the title of three articles in the January number.

The Kalendar of the ROYAL INSTITUTE OF BRITISH ARCHITECTS, 1894–95, comes to hand in its usual neat and attractive form. An article upon the Progressive Examinations qualifying for Registration as Probationer and Student cannot fail to be of interest to architects in this country. Space will not allow us to make extended extracts from the rules. The following advice to applicants before entering an architect's office, are certainly wise and as true on this side of the water, as upon the other. The preliminary, qualifying for probationer. The subjects comprised in this examination are those in which proficiency should be attained by the applicant before entering an architect's office, and it is desirable that special attention be given to them before he leaves school.

Clear and well-formed hand writing, correct spelling, grammar and punctuation are indispensable. Powers of observation and of graphic description, facility of composition and lucidity in the expression of ideas, should be carefully cultivated, as being of the utmost value in the prosecution of further studies, and in the work of later years.

Arithmetic, algebra, and plan geometry should be familiar to the applicant, and a knowledge of their application in the solution of simple problems in elementary mechanics and physics should be acquired.

The geography of Europe and the history of England from the Norman Conquest to the end of the Tudor dynasty should be well studied, regard being had to the connection between the history of the country and its architecture.

A good knowledge of French is essential, and of German or Italian very desirable, and a clear understanding of the Continental metrical system will also be useful.

Geometrical drawing and the elements of perspective are indispensable subjects of study, and should receive particular attention; while freehand drawing with rapidity and precision from the cast and the antique, and sketching with accuracy, should be carefully cultivated. Reasonable proficiency in these subjects is of the first importance.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

CONSTRUCTION OF PARTY WALL AGREEMENT.—A deed between W. and J. owners of adjoining lots, and the former's mortgagees, recited that it was agreed that J. should convey to W. 5 ¾ inches lying between the western wall of his building and his boundary line, and pay W. $400, in consideration of which W. should execute a convenant to preserve the easement for light and air unto J., his heirs, assigns, etc., and also use five ¾ inches for the purpose of erecting a wall, sixteen feet high only, to the eastern end of a certain addition which W. proposed to so build that its eastern wall should rest on the boundary line between the lots, and that neither W. nor any person claiming through him should make any erection on his lot or such strip higher than sixteen feet, unless there was left between the buildings a clear space of thirty-six inches from the height of sixteen feet upward. It was held, that J. could put windows in a seven story party wall erected by him, six ¼ inches of which stands on W's ground.

Weigman v. Jones, Supreme Court of Pennsylvania, 30 At. Rep. 198. 183.

LIABILITY FOR EXTRAS FOR CHANGES ORDERED BY BUILDING INSPECTORS.—After work was commenced on a church under a contract providing that no extras should be paid for unless agreed to in writing signed by the parties, city building inspectors ordered changes, a sketch of which was prepared by the architect, and the contractor was directed to make such changes. Though there was no express contract for the extras made necessary by the order, it was the duty of the church corporation to see that the order was obeyed, from which arose an obligation to pay for the work necessary therefore, done with the consent of the corporation, under the direction of its architect.

Cunningham v. Fourth Baptist Church, Supreme Court of Pennsylvania, 28 At. Rep. 490. 113.

WHEN CONTRACTOR HAS NO LIEN.—The statute giving a lien to any one who furnishes labor or material for a building "under contract with the owner or his agent, trustee, contractor or contractors," does not give a lien to one furnishing labor or material under a contractor with a lessee in the absence of authority from the owner. The owner of land is not affected by a judgment foreclosing liens for improvements against his lessee if he was not made a party to the action.

Penfield v. Harris, Court of Civil Appeals of Texas, 27 S. W. R. Rep. 762. 86.

EFFECT OF ABANDONMENT OF BUILDING CONTRACT BY CONTRACTOR.—A contractor, to whom payment was to be made only upon approval of the work by the architect, gave complainants an order payable out of the amount to become due, which the owner accepted on condition that the architect approve the work. The contractor abandoned the work before completion. A bill in equity to enforce payment of such order, and for an accounting of the amount due the contractor, was demurrable, as complainants had an adequate remedy at law. Where a contract provides that if the contractor fail to complete the building as agreed the owner may do so, and deduct the expense from the contract price, the contractor cannot abandon the work, and compel the owner to complete it, and account to him for the balance of the contract price.

Bernz v. Marcus Sayre Co. v. Court of Errors and Appeals of New Jersey, 30 At. Rep. 21. 139.

CONSTITUTIONAL LAW RESTRICTING HOURS OF WORK.—The statute which forbids contractors for city work in the city of Buffalo to accept more than eight hours for a day's work, except in cases of necessity, does not "abridge the privileges of citizens" or deprive any citizen of his rights or privileges.

People v. Beck, 30 N. Y. Supp. 473, Supreme Court of Buffalo, General Term. 50.

BUSINESS MOSAICS.

The Schenck Patent Swinging Hose Reel heretofore manufactured by the W. T. Y. Schenck has become the property of the Revere Rubber Co., whose San Francisco Store is located at 527 Market street. The Company is one of the largest and its reputation as manufacturers of high class goods is well established. The Schenck Reel will be a feature of its business and receive the attention so valuable a patent deserves.

When Adam in bliss, asked Eve for a kiss, she pucked up her lips with a coo; gave a look so ecstatic, and answered emphatic, "I don't care A-dam if you do."—*Clay Record.*

The J. L. Mott Iron Works, New York, Boston, Chicago, St. Louis and San Francisco. See their advertisement on p. v of this journal. The Imperial Porcelain Roll Rim Roman Bath cannot be improved upon for fine appearance, durability and perfection from a sanitary stand point, while entiling no labor of scouring or burnishing, merely wiped out with a sponge and the tub is cleaned. For information and circulars apply to M. S. James, Pacific Coast representative, room 35, Flood Building, San Francisco.

Take after his father—"The boy with sawed-off trowsers."—*Clay Record.*

Edward B. Hindes & Co., 411 Mission street, San Francisco, is the place to go if you want Hill's Patent Inside Sliding Blinds, Perfection Window Screens, Latest Improved Venetion Blinds, Patent Self Coiling Burglar and Patent Self Coiling burglar and fire-proof Steel Shutters, or Rolling Wood Partitions. Send for a catalogue and prices if you have not time to call and examine for yourself. Don't go if you can't resist temptation for you are sure to leave an order.

Miss PEART—"What column do you read first in the paper?" MISS TEAR—"The society column. Why?" MISS PEART—"I should think you would be more interested in "Male help wanted."—*Philadelphia Inquirer.*

The attention of those about to build, is called to the advertisement of Joseph Budd the well known manufacturer of sanitary appliances, page vii of this journal. The medals and diplomas awarded him at the State Fair in 1888 and 1889, are all well enough in their way but the reliability of the man, and the quality of the goods furnished by his house, prove that the old saying "Actions speak louder than work," is true, and accounts for the popularity that the public have manifested in keeping him busy filling orders, even in dull times—what will it be when business revieves—don't forget the number 575 Mission street, San Francisco.

Bacon—"What are you doing with a picture of a football player pinned to your coat?" EGBERT—"Oh, yes! My wife pinned that there so as to remind me to have my hair cut."—*Yonkers Statesman.*

Clawson's Patent Chimneys, most complete and safest in the market, 1340 Market street, San Francisco. Call and be convinced.

Vulcan Iron Works, 135-145 Fremont street, San Francisco. Architectural and ornamental iron works, also stable fixtures, hay racks, feed boxes, stable guards and harness fixtures, etc., etc. See advertisement on page x this journal.

Mrs. KNERVY rang the bell for the domestic. "Nora," she said, when the kitchen lady appeared, "I'll feed the canary myself after this. The doctor says I am to take more exercise."—*Chicago Tribune.*

The Paraffine Paint Company at 116 Battery street, will be found a great convenience to the householder, now that rainy weather is at hand, many a leaky roof only wants a good coat of paint, to make it water tight, nor are their efforts to do good to the public confined to this city, Mr. E. J. Judah is agent for the company at 221 South Broadway, Los Angeles. After the present rain points out the weak spots in your roof there will be plenty of time to apply Paraffine Paint before the rainy season commences for good.

Highee—"By Jove, old man, you are looking extremely well. Been taking a vacation? BRADFORD—"No; my wife has."—*Truth.*

To those in want of mantels, grates and tiles, in fact any thing in the way of heating apparatus we would say go to W. W. Montague & Co., their main store in San Francisco, with branches at Los Angeles and San Jose.

She—"Doesn't football make demons of men?" HE—"No; it frequently makes angels of them, though."—*Yonkers Statesman.*

If you specify Samson Spot Cord you can tell at a glance that no other cord is substituted; warranted free from waste and imperfections of braid. Samson Cordage works, Boston, Mass. Those that have the bother of the cord that is unreliable, will rejoice that their troubles are ended if they use their cord.

Deacon EBBONIE—"Kunnel, I'se come to ax a favor ob you." COLONEL FAIRFAX—"To help you out of debt? DEACON EBBONIE—"No, sar; to help me into debt—wif yo'self!"—*Truth.*

Who will be the first to order a memorial window in memory of some dear friend for the year 1895, any in want of something in that line that will be an honor to their church, and a pleasure to themselves should go to the California Art Glass works. Wm. Schroeder, President, 105 Mission street, cor. Spear street, San Francisco.

"It's a good idea to make light of your troubles." "I do," replied Happigo. "Whatever a creditor sends me a letter I burn it."—*Washington Starr.*

Our friend W. W. Wickersham still continues at his old quarters, 1125 York street, San Francisco to do business as contractor and builder those who employ him once always want him to work for them again.

ANNUAL BUILDING SUMMARY.

IN the following table we present the number and value of buildings erected in San Francisco during the past year, as shown by the contracts filed at the City Hall.

FOR FIRST SIX MONTHS.—1894.

1894	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value.	No. of Buildings	No. of Contracts	Alterations & Addit'ns Value.	No. of Buildings	No. of Contracts	Total Value.
Jan'ry ...	1	5	$ 64,867	27	37	$ 124,620	19	29	$ 46,046	47	71	$ 235,533
Feb'ry ...	2	6	36,436	22	31	96,975	7	12	17,452	31	49	150,893
March ...	1	3	11,225	56	60	395,470	14	17	34,591	71	80	441,286
April.....	7	15	165,437	121	144	289,214	16	21	33,604	144	180	488,255
May.....	5	12	126,691	35	46	199,653	16	16	50,281	56	74	376,625
June.....	7	11	74,704	40	46	152,992	13	13	39,166	60	70	266,862
Total	23	52	$ 479,360	301	364	$1,258,924	85	108	$221,140	409	524	$1,959,424

FOR SECOND SIX MONTHS.—1894.

1894	No. of Buildings	No. of Contracts	Brick Building Value.	No. of Buildings	No. of Contracts	Frame Building Value.	No. of Buildings	No. of Contracts	Alterations & Additions Value.	No. of Buildings	No. of Contracts	Total Value
July	4	9	$ 66,605	32	41	$ 113,850	15	15	$ 39,743	51	65	$ 220,158
Aug	5	10	146,489	36	43	86,994	14	14	44,033	45	67	277,516
Sept	5	8	132,519	51	60	227,260	12	12	25,611	68	80	385,390
Oct	2	2	61,550	69	71	233,414	12	12	52,450	83	85	347,414
Nov	3	7	281,232	33	39	162,458	9	9	31,113	45	55	474,803
Dec.....	4	9	120,137	46	47	195,364	16	16	49,633	64	71	365,134
Total	23	45	$ 808,532	267	301	$1,019,340	78	78	$242,583	306	423	$2,070,415
G'd Total	46	97	$1,287,892	568	665	$ 2,278,224	163	186	$ 463,723	715	947	$ 4,029,839

Showing a decrease upon the first six months corresponding in 1893 of about five hundred thousand dollars, and making the total amount for 1894, $4,029,839, to this amount should be added $500,000 estimated where no contracts have been filed, grand total, $4,529,839.

We give the total values and numbers from 1880 so that our readers may make a comparison:

1880—	397	engagements,	value.....	$1,754,435
1881—	533	"	"	3,790,732
1882—	785	"	"	3,896,212
1883—	803	"	"	5,261,689
1884—	1,127	"	"	6,202,807
1885—	1,457	"	"	7,043,999
1886—	1,148	"	"	6,401,669
1887—	1,093	"	"	6,605,054
1888—	891	"	"	6,244,220
1889—	1,081	"	"	7,500,000
1890—	1,037	"	"	7,095,013
1891—	1,162	"	"	6,946,056
1892—	920	"	"	5,856,341
1893—	905	"	"	3,962,532
1894—	947	"	"	4,529,839

CITY BUILDING NEWS.

Broadway bet. Kearney and Montgomery. Alterations and additions to Garibaldi Hall; owner, Garibaldi Society; days work; cost $6000.

California and Larkin. Lathing and plastering; owner, Henry Kahn; architect, J. M. Lyon; contractor, A. Flood; signed, Dec. 12; filed, Dec. 14; cost $1100.

California and Jones. Rock and stone apartment building; owner, Nob Hill Improvement Co.; architects, Bugbee & Gash; contractor, S. Gilletti; cost one dollar per load.

California and Jones. All molds for artificial sand stone; owners, Nob Hill Improvement Co.; architects, Bugbee & Gash; sub-contractors, Kegaent & Manetta; cost $1000.

California and Jones. Hauling rock; owners, Nob Hill Improvement Co.; architects, Bugbee & Gash; contractor, J. J. Norton; cost one dollar and twenty cents per load.

Capp near 17th. To build; owner, A. Eberhart; architect, Emil John; contractor, Emil Hoelle; signed, Dec. 13; filed, Dec. 15; cost $4525.

Clipper near Noe. To build; owner, Julie A. Kammer; architect, F. B. Wood; contractor, T. R. Bassett; signed, Dec. 14; filed, Dec. 15; cost $2300.

Clement near 5th Ave. To build; owner, Geo. M. Coon; contractor, A. L. Jacobsen; signed, Dec. 27; filed, Dec. 27; cost $2200.

Davis street. Brick work, etc.; owner, Isaac Kohn; architects, Pissis & Moore; contractor; Liebert & Hoffman; signed, Nov. 12; filed, Nov. 12; cost $5919.

Duncan and Dolores. To build; owner, John J. Comerford; contractor, Wm. Plant; signed, Jan. 7; filed, Jan. 7; cost $1250.

Eighteenth near Sanchez. To build; owner, Peter J. Finley; contractor, G. A. Nagel; signed, Dec. 1; filed, Dec. 13; cost $1550.

Fourth Ave. and California. To build; owner, T. H. Simons; days work; cost $5000.

Fourth and Berry. Sheds for holding voting booths; owner, City of San Francisco; contractor, J. M. Weir; cost $1390.

Green and Buchanan. Carpenter and mill work for six frame dwelling; owner, California Title Insurance and Trust Co.; architect, Wm. Mooser; contractor, John Martin; signed, Dec. 29; filed, Jan. 3; cost $4740.

Green and Buchanan. Painting; owner, California Title Insurance Trust Co.; architect, Wm. Mooser; contractor, Joseph Fuchs; signed, Dec. 29; filed, Jan. 3; cost $1000.

Green and Buchanan. Plumbing, etc.; owner, California Title Insurance Trust Co.; architect, Wm. Mooser; contractor, J. P. Culley; signed, Dec. 29; filed, Jan. 3; cost $1300.

Green and Buchanan. Granite curbs, etc.; owner, California Title Insurance Co.; architect, Wm. Mooser; contractors, H. M. Peterson & Co.; signed, Dec. 29; filed, Jan. 3; cost $1000.

Green and Buchanan. Plastering; owner, California Title Insurance Co; architect, Wm. Mooser; contractor, T. Tucker; signed, Dec. 29; filed, Jan. 3; cost $660.

Guerrero near 23d. Alterations to old church and construction of a new edifice owner, Trustees of Second Unitarian Church; architect, Samuel Newsom; contractor, John Foster; signed, Dec. 5; filed, Dec. 8; cost $9575.

Haight near Scott. To build; owner, David Sanderson; architect, R. H. White; contractor, John Furness; signed, Dec. 28; filed, Jan. 2; cost $1800.

Hayes near Devisadero. To build; owner, Wm. Macker; architect, Emil John; contractor, J. H. Munster, signed, Jan. 1; filed, Jan 8; cost $4552.

Jackson and Laguna. Plumbing; owner, W. F. Whittier; architect, E. R. Swain; contractor, E. J. Dufley; signed, Dec. 26; filed, Jan. 3; cost $2750.

Lombard and Steiner. To build; owners, architects and builders, Knight & Pottinger; cost $5000.

Lombard near Fillmore. To build; owner, T. W. Rollet; contractors, W. H. Stevens & E. Wood; signed, Dec. 15; filed, Dec. 21; cost $1000.

Lyon near Hayes. To build; owner, Mary E. Liddle; contractor, W. W. Rednall; signed, Dec. 24; filed, Dec. 24; cost $1525.

Market near 5th. Ventilating and heating a brick building; owner, Miss Emma Spreckles; architect, Reid Bros.; contractor, W. W. Montague & Co.; signed, Nov. 20; filed, Dec. 8; cost $11,375.

Market near 5th. Electric light plant; owner, Miss Emma Spreckles; architect, Reid Bros.; contractor, California Electric Works; signed, Nov. 26; filed, Dec. 8; cost $3720.

Market near 5th. Complete ventilating; owner, Miss Emma Spreckles; architect, Reid Bros.; contractor, American Ventilating Co.; signed, Nov. 28; filed, Dec. 8; cost $600.

Mason near Geary. Excavation and concrete work for a five story brick; owner, Hall Association of the N. S. G. W.; architect, A. C. Lutgens; contractor, Pacific Concrete Co.; signed, Dec. 21; filed, Dec. 26; cost $3226.

Mason near Geary. Steel and iron work; owner, Hall Association N. S. G. W.; architect, A. C. Lutgens; contractor, Western Iron Works; signed, Dec. 26; filed, Dec. 29; cost $9000.

Mason near Geary. Carpenter and mill work; owner, Hall Association of the N. S. G. W.; architect, A. C. Lutgens; contractor, F. A. Williams; signed, Dec. 31; filed, Jan. 8; cost $19,935.

Mason near Geary. Granite work above sidewalk line; owner, Hall Association of the N. S. G. W.; architect, A. C. Lutgens; contractor, J. P. M. Phillips; cost $4650.

Mission near Fourth. Carpenter work of four-story brick; owner, A. W. Wilson, architect, J. R. Miller; contractor, M. J. Gallagher; cost $11,400.

Pacific near Taylor. To build; owner, H. Maskow; architect, Victor Monet; contractors, Mullen & Harrigan; signed, Jan. 3; filed, Jan. 4; cost $2375.

Pine near Kearny. Two-story brick; owner, Loyd Tevis; architects, Kenitzer & Barth; superintendents, Mahoney Bros.; cost $45,000.

Powell near Pine. Removal of old building; owner, August Schiller; architect, Salfield & Kohlberg; contractor, C. B. Schmid; signed, Dec. 28; filed, Jan. 5; cost $5425.

Turk near Jones. To build; owner, G. B. Gilman; superintendent, Anderson & Bros.; cost $20,000.

Twenty-second near Castro. To build; owner, T. K. Long; architect, R. H. Daley; contractors, Brutcher & Griffith; signed, Dec. 12; filed, Dec. 17; cost $1350.

Seventh Ave. near Clement. To build; owner, Sarah F. Mount; contractor, J. Campbell; signed, Dec. 29; filed, Jan. 2; cost $2200.

Sutter near Fillmore. To build; owner, Mary Hinkle; architect, Geo. Hinkle; days' work; cost $1000.

Van Ness and Geary. Carpenter, mill work, etc.; owner, Mrs. Julia Martin, guardian, etc.; architect, M. J. Lyons; contractor, H. Jacks; signed, Nov. 20; filed, Dec. 10; cost $1186.

Van Ness near Vallejo. To build; owner, H. E. Law; architect, J. B. Mathiesen; contractors, Anderson & Gray; signed, Dec. 26; filed, Dec. 27; cost $7515.

Washington and Davis. Brick stone and iron work; owner, Estate of John Ivancovich; architects, Pissis & Moore; contractors, Leibert & Hoffman; signed, Nov. 12; filed, Dec. 21; cost $17,239.

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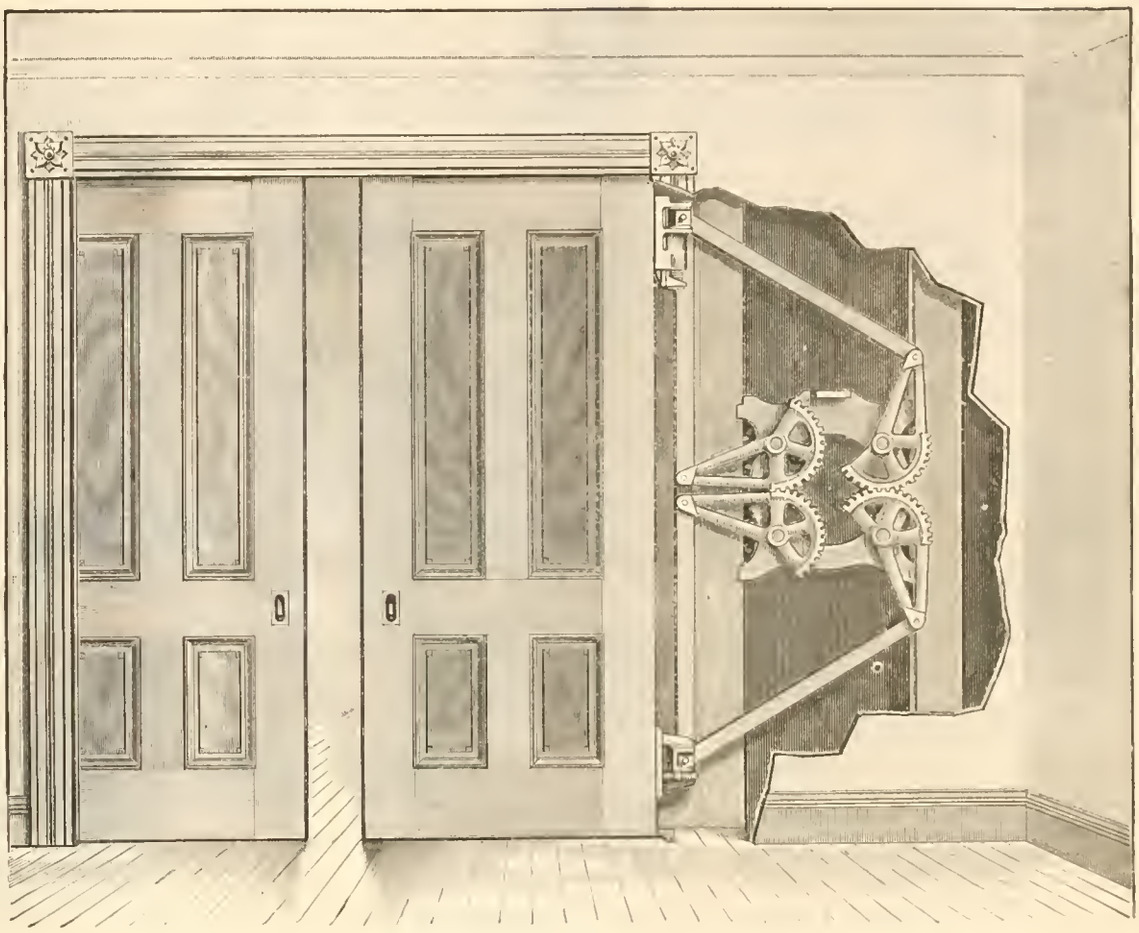

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Dec. 5. Henry Ralston vs. John and Luigi Ferrarri; Italian Cemetery graves 1, 2, 3, 4, of lot 53; $29.

Dec. 25. Geo. E. Belmor vs. H. G. Johnson vs. Ernest Rehage; 24th near Folsom; $52.

Dec. 5. San Joaquine Brick Co. vs. J. P. and A. E. McGinty and D. J. O'Brien; $178.50.

Dec. 25. J. F. Wagner vs. F. C. Fesler and M. Greenwood; $160.

Dec. 25. P. R. O'Brien vs Eliza Swift; Sixth near Howard; $68.50.

Dec. 5. Joost Bros. vs. R. F. Morgan and A. N. McIsaacs; $14.

Dec. 5. Bush & Mallett Co. vs. F. C. Fesler and M. Greenwood; $200.

Dec. 5. J. J. Evarts vs. T. F. Northey; Devisadero near Eddy; $30.10.

Dec. 5. Ensign & McGuffick vs. same

Jan. 5. Adolph Meyer vs. Luke O'Connor, P. F. Donlan, J. McFarland, C. E. Simonton and H. S. Griffin; $10.

Jan. 5. Alexander McPherson vs. Thomas F. and Amanda Barry; $49.

Jan. 5. Henry Bauer vs. C. Helwig and A. Wanner; Guerrero near 25th; $76.

Jan. 10. John Boller vs. H. E. Griffin and C. E. Simonton and Luke O'Connor; Tehema near 8th; $15.

Jan. 10. McDevitt & Cleary vs. Same; $82.

Jan. 10. Robert Boyd vs. Luke O'Connor, H. S. Griffin and C. E. Simonton; Tehama near 8; $100.

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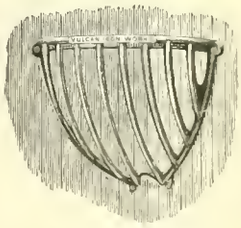

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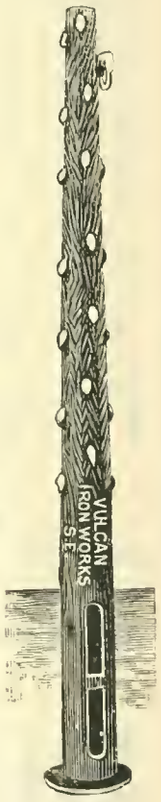

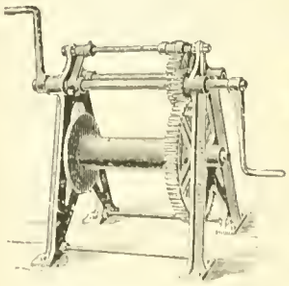

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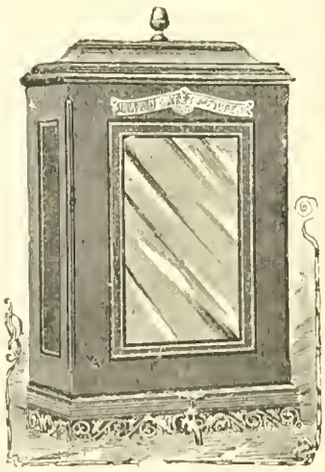

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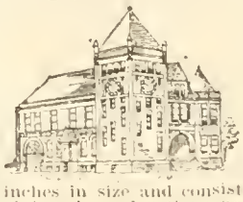

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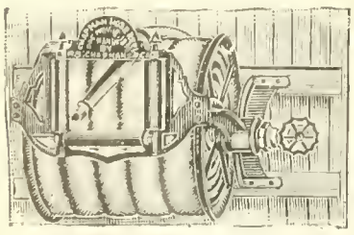

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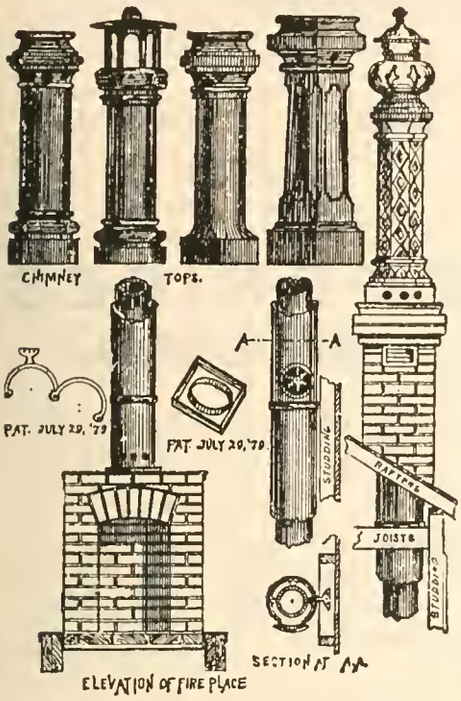

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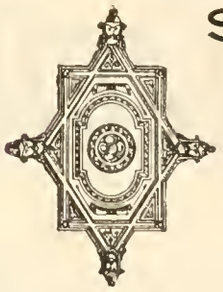

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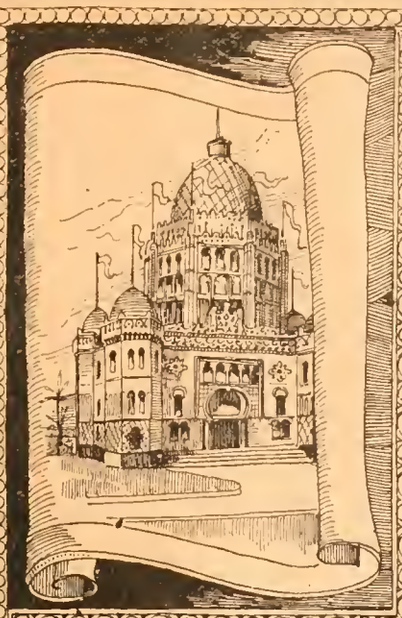

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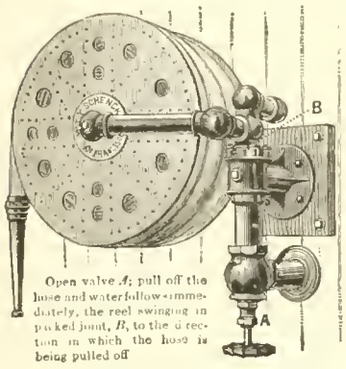

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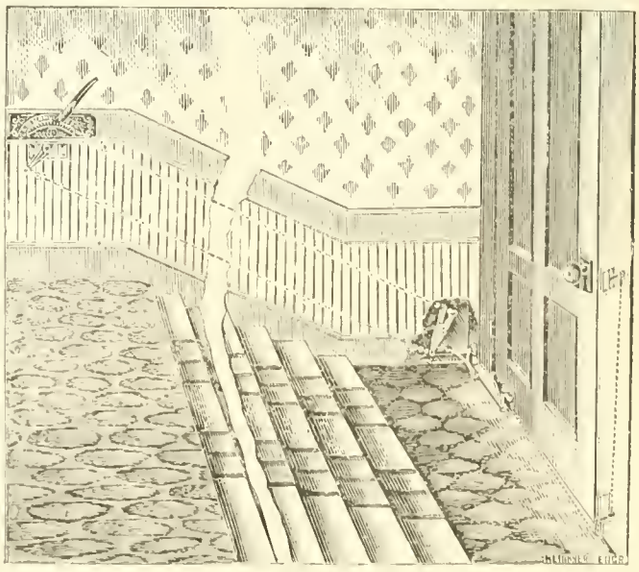

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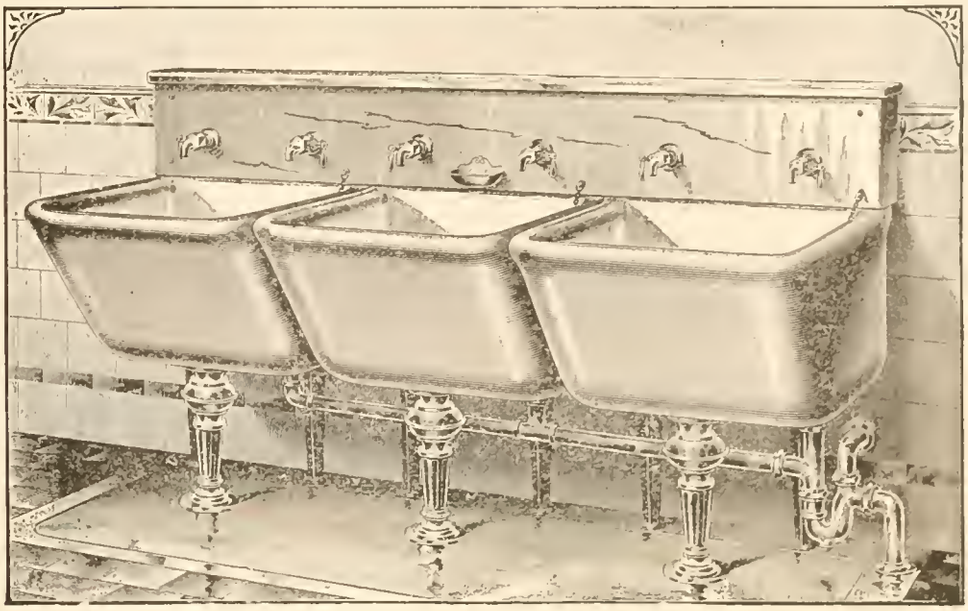

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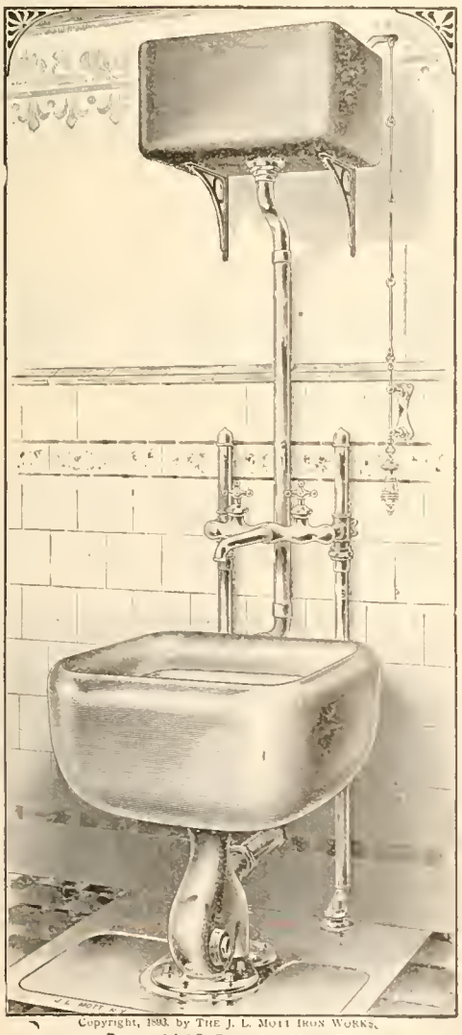

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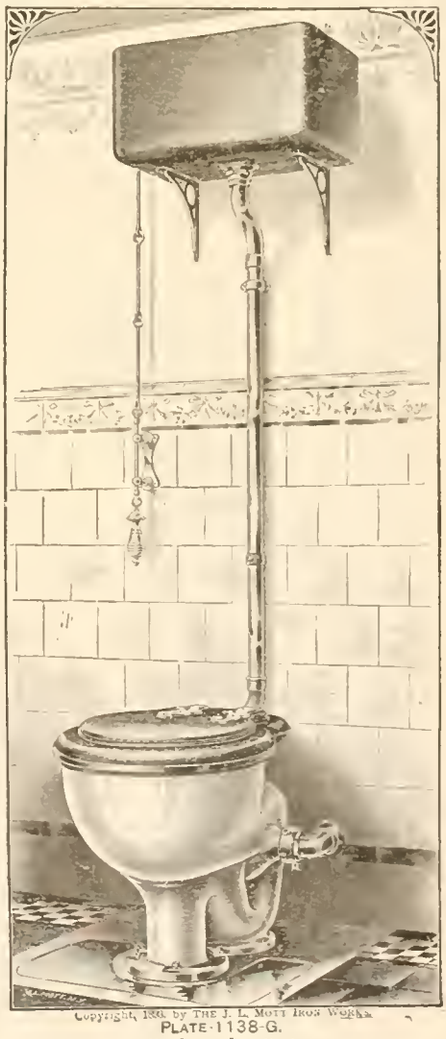

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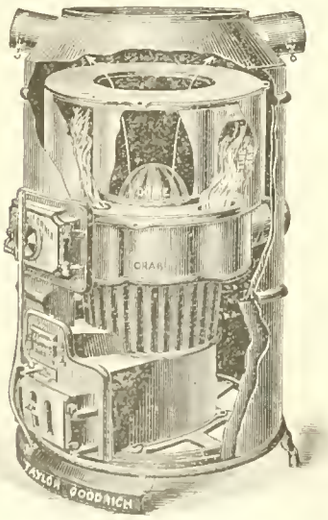

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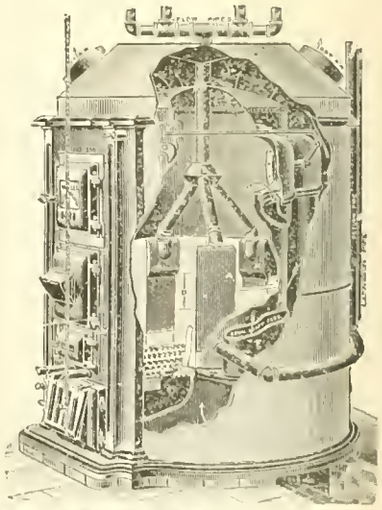

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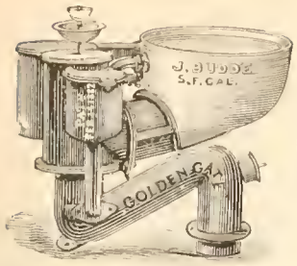

Popular "Golden Gate" Plug Closet with trap.

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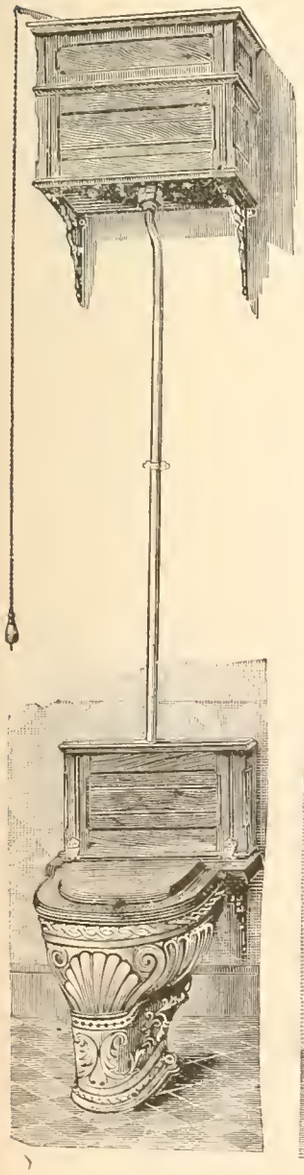
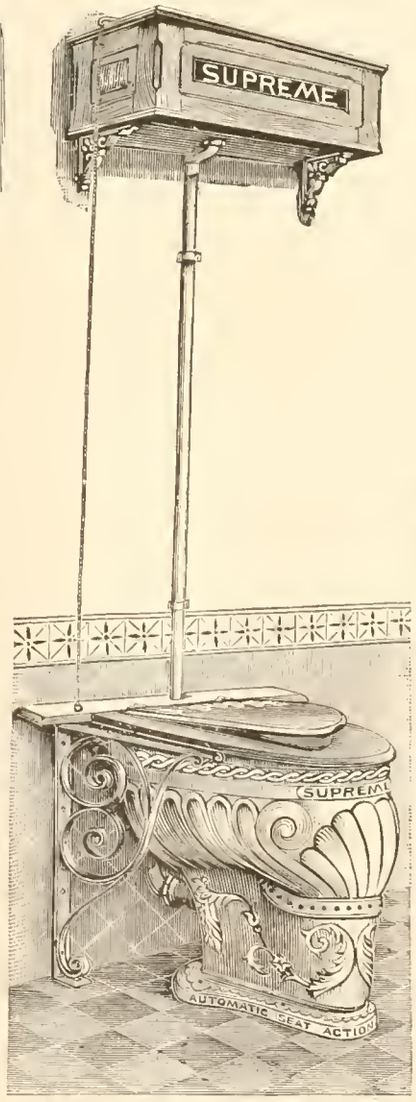
Architects are cordially invited to call at my Sample Room, 575 Mission street and Inspect my Closets in Working Order.



"Supreme Closet" with antique oak seat and tank, nickel-plated flush pipe and brackets from $ 0 to $45 complete. 200 in Palace Hotel.



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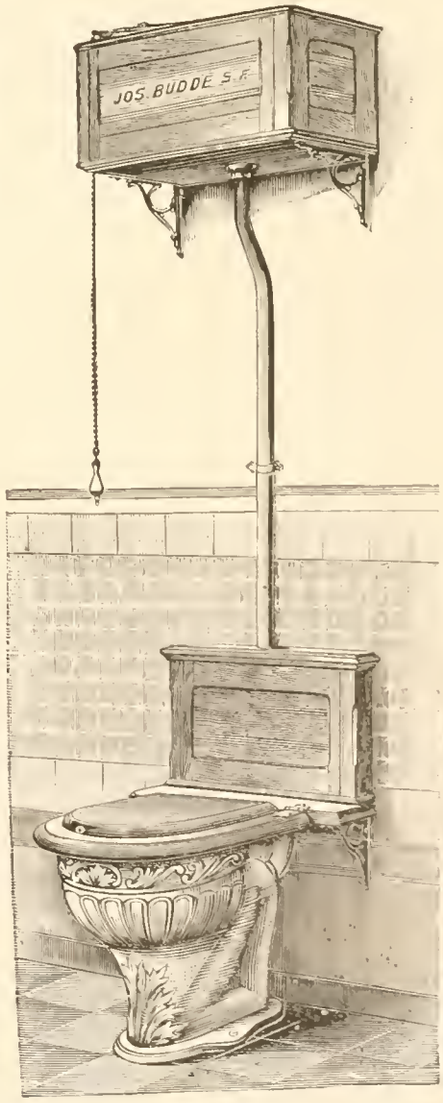

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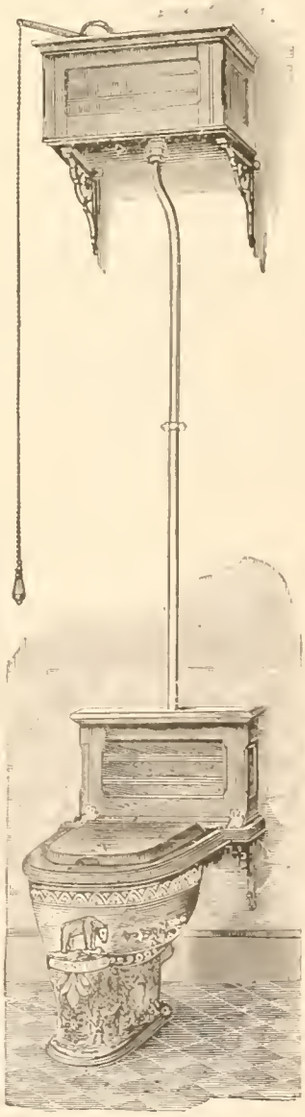

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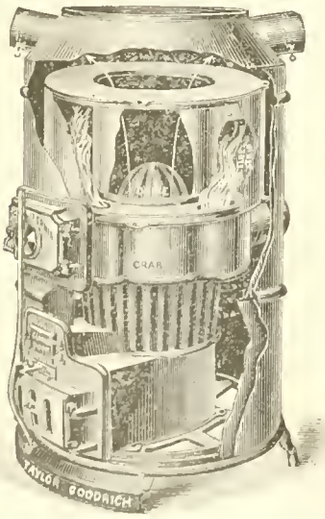

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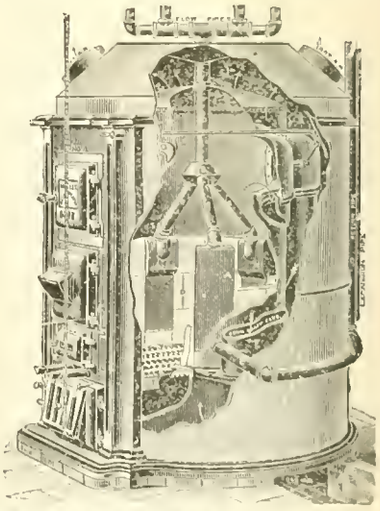

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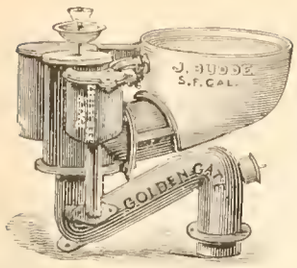

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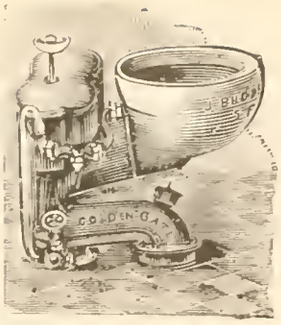

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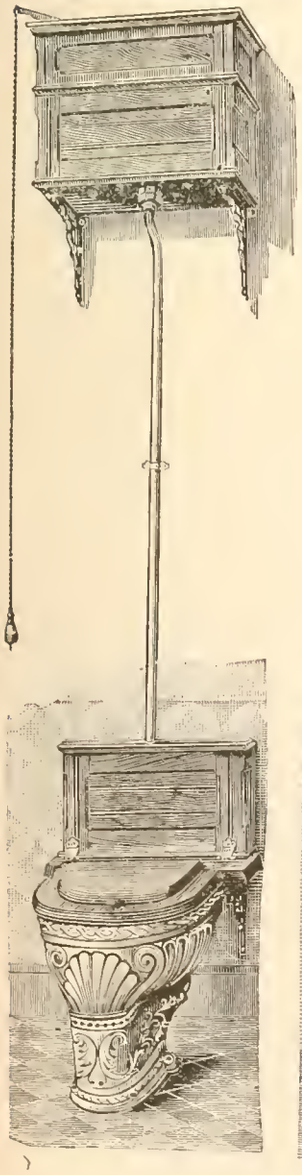

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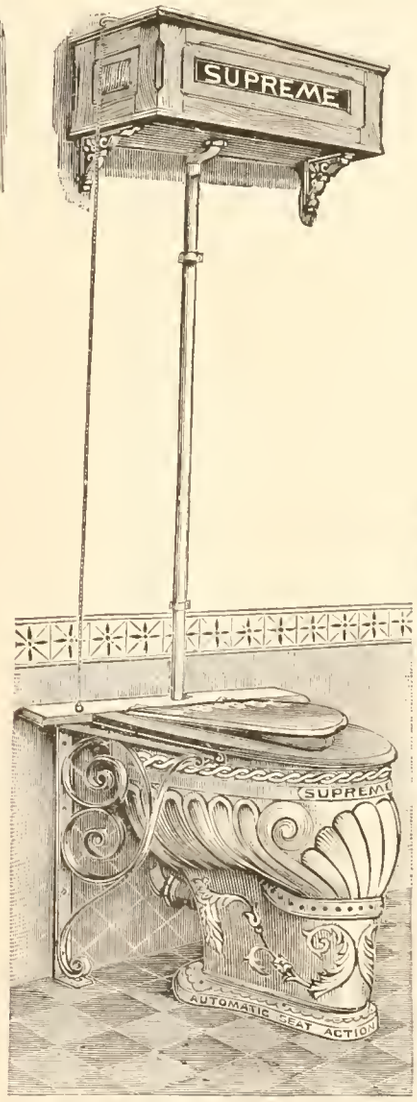

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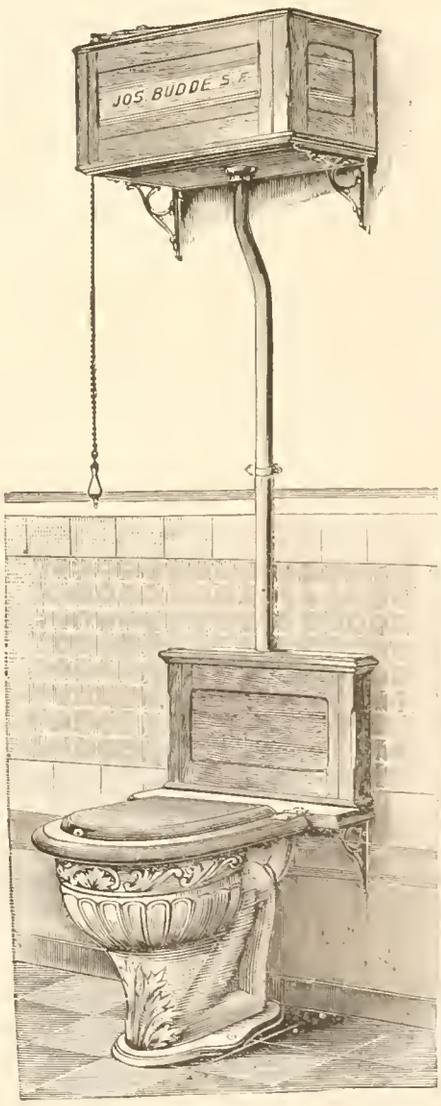

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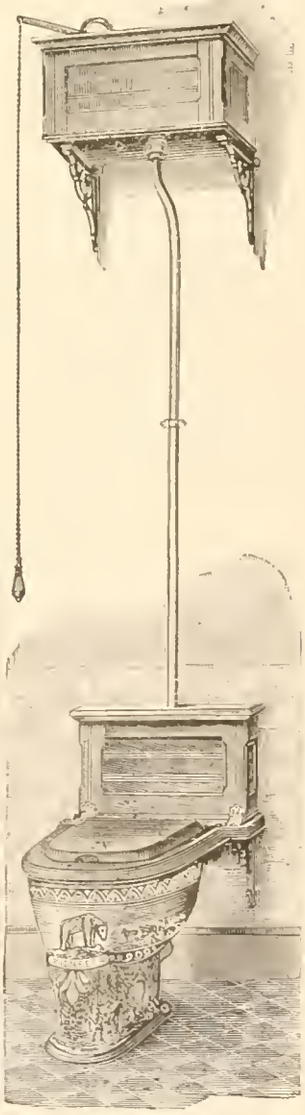

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VOLUME XVI. FEBRUARY 20th, 1895. NUMBER 2.

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MR. J. M. Carrere, an architect of acknowledged ability, has declined after mature consideration, the position of Supervising Architect of the Treasury Department of the Federal Goverment, which was placed at his disposition.

It is greatly to be regretted that Mr. Carrere could not have brought himself to accept the position. While it would doubtless have involved personal sacrifices on his part, yet the interests of the public and the advancement of Architecture would have received more earnest consideration than can be hoped for now for years to come.

Following is Mr. Carrere's letter:—

JANUARY 28, 1895.

SIR:—As promised to you in our interview at the Treasury Department on January 24th, I have been carefully considering the possibility of accepting the position of Supervising Architect, understanding that you are willing to offer the appointment to me on the terms of my letters and memorandum to you and to Mr. Price and my several interviews with you and Mr. Curtis.

Having had the question of public architecture at heart for several years, and having devoted much of my time to promoting the interests of the "McKaig Bill," when called upon by a large number of leading men in my profession to accept this office, and also understanding that your department was willing to tender the office to me at their request, though I was in no sense an applicant, I felt obliged, as a matter of duty to my profession, laying aside all questions of personal sacrifice, to take the subject under consideration.

I have had every opportunity, owing to your courtesy, to fully investigate the office, and I have been trying for the last two weeks to convince myself that under certain conditions which I asked for, and which I understand you are prepared to grant, I might accept the office with a fair chance of accomplishing the purpose which both you and the profession have in mind, namely, to raise the artistic standard of our public architecture.

In my anxiety to respond promptly and fully to the confidence which has been placed in me, I have at times thought that the task might at least be attempted, and have stood ready to accept the office. After further reflection, and after having fully explained the situation to several leading architects of the country and after consultation with them, I am now convinced that if I should accept the office, and meet even with partial success, I would be defeating the true object which both the profession and yourself have in

view. To our minds, the undertaking is a physical impossibility and must fail.

It is therefore with the greatest regret, and a true appreciation of the efforts which you have personally made to help this branch of the service, that I find myself compelled to advise you that I will not be able to accept the office if tendered to me. In explanation: The work of this department, irrespective of its present organization, or of any improvement that could be made in the same, comprises a staff of about 150 employees, their duties comprising:

1st.—A legal department having charge of all contracts, purchases of sites, deeds, interpretation of laws, classification of the same, and other legal matters relating specifically to this department.

2d.—An extensive system of accounting, burdened by the vast number of small accounts, resulting from the maintenance and repairs of buildings, and needing a very great amount of detail.

3d.—The technical, or draughting division, in which all computations of quantities and cost of work are made: auditing of all accounts; all original designs and working drawings; specifications and calculations comprising both the artistic and practical work, and involving sanitary heating, elevator, lighting, ventilating, and other plants of a purely technical nature; also the superintendence, supervision, and inspection of all these works. The work itself is scattered over the entire United States, and is absolutely beyond the reach of any one man except by proxy, and practically beyond his control.

The number of buildings now in the course of construction, some of them well advanced, others hardly started, and many of them still untouched, is 115, ranging from the Marine Hospitals, the appropriation for which is only about $2000, but involving much troublesome detail and waste of time, up to buildings like the San Francisco Post Office, the appropriation for which is about $2,000,000; Buffalo Post Office, about $1,500,000; Kansas City Post Office, about $1,000,000; the New York Appraiser's stores, $2,000,000; these being the most important buildings, the others ranging all the way from $500,000 to $50,000 and under. In addition to this, eight buildings are now about to be appropriated for, ranging from $100,000 up to $4,000,000 for the Chicago Post Office, the latter to be constructed within a period which I understand is not to exceed two years.

In addition to the above, Congress appropriates about two hundred thousand dollars a year for the maintenance of over two hundred and fifty buildings; most of this money is spent in small amounts, ranging from fifty cents upwards, for repairs, etc., involving infinite trouble and drudgery, and demanding much time and attention.

The present condition of this work is in such a disorganized state that it would take the best part of any man's time to reorganize the work itself, irrespective of the department. The accumulated waste of money is beyond belief. The department, in the main, seems to be well organized, though cumbersome. The personnel is efficient in a measure, but ill adapted to the class of work which the country expects of our Government, and absolutely deficient in artistic worth. The tenure of the office is controlled either by civil service rules or by political influence, and with this state of affairs the office of Supervising Architect, legally, is merely that of clerk of the department appointed by the Secretary of the Treasury, and though his responsibility is supposed to cover all the above work, his authority is absolutely dependent on the Secretary of the Treasury, and much of it is divided with heads of departments.

Any man, no matter what his ability or his power for work and concentration, and no matter what conditions might be offered to him, even those of absolute responsibility with absolute authority, would have to devote himself either to managing the office, allowing the designing to be done by draughtsmen, as at present, or to designing, allowing the office to be managed by heads of departments, as at present; and no man of ability, with a reputation to lose as an artist, would be presumptuous enough to accept the office, even if his duties were to be confined to designing, irrespective of any other work or responsibility, because it is absolutely beyond the grasp, and the ability of any one man who has ever lived to imprint his personality upon this work, and much less to design it and study it himself.

The time must come, and I believe has come, when this work should be divided and intrusted to the best architects in this country, as suggested by the bill proposed by the architects and known as the "McKaig Bill," leaving the administrative portion of the work only in the hands of the Government, where it belongs. My examination of the office and its possibilities convinces me that the underlying principle upon which it is based is radically wrong, and that it is beyond the power of any one man to make a success of it. The system, not the man, should be changed.

Yours respectfully,

JOHN M. CARRERE.

To Hon. J. G. Carlisle, Secretary of Treasury, Washington, D. C.

IN view of the fact that there is now a bill for the licensing of Architects before the Legislature would it not be well for the Chapters of the American Institute of Architects to inaugurate a series of voluntary examinations after the same manner as the British Architects did many years ago; after much patience and perseverance they have finally got these examinations so well established throughout the Kingdom that a successful passing thereof is now necessary before a Candidate is eligible to the R. I. B. A. By this means a standard of excellence is attained that will make a member of that body respected wherever these facts are known, and such a method as this is the only way to raise the profession here from its present, one might call it, degraded state.

When once the public knows that to be able to put A. I. A. after ones name means that the person carrying it has had to give evidence of technical and general education before he can do so, it will with a better grace trust itself to such, and it would help to make many members of the profession who now stand aloof willing to join such an organization.

On another page will be found a History of the Architectural Examining System of Great Britain.

LIGHTING OF SCHOOL ROOMS.

THE proper lighting of school rooms being one of the most important matters in the planning of School Houses the Board of Education of Alameda have examined into the eyesight of the school children—and the following extract from the *Alameda Encinal* gives the result of the experts report:

"The Board of Education held its regular meeting last evening. All the members were present, and after the reading and approval of the minutes of the previous meeting, Dr. P. M. Jones, the occulist, made a report of the result of the examination of the eyes of some 1367 pupils in our public schools.

The report was exceedingly interesting, as well as instructive. In the High School he had found 22 per cent of the pupils affected with near sightedness, and 30 per cent. with conjunctuitis, or inflammation of the eye. In the Haight School 15 per cent near sighted and 17 inflammation; Encinal School, 8 near sighted and 35 inflamation; Wilson School, 3 near-sighted and 29 inflammation.

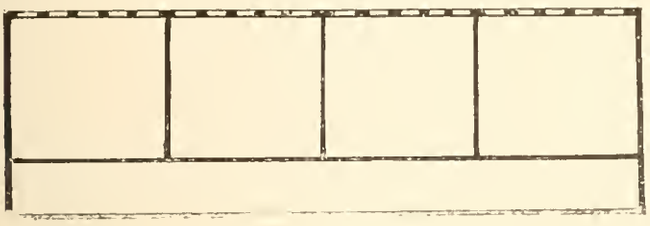
In the Porter School he found a startling condition. He stated that 52 per cent of inflammation was found and 5 per cent of near-sightedness. The inflammation here, he

stated, was 20 per cent higher than it should be, and was occasioned by reason of the poor light. He reported that the per cent of strained eyes in this school is also large.

"The matter of light should be fully appreciated in the construction of the new West End School," said the Doctor. "Windows placed only a foot from the ceiling will give 25 per cent better lighting capacity than the ordinary location." As to shades, he recommended opaque shades in preference to blinds. On the whole, however, he admitted that the condition of the eyes of our pupils, outside the Porter School, was better than in many other cities."

It is gratifying to see from this report that the latest building erected the "Wilson" School has the least percentage of bad eyes—and the one erected a little before it the "Encinal" comes close to it, while the oldest school houses, the High and the Porter Schools have by far the largest percentage of bad eyes.

This indicates what a vast stride has been made in School Architecture within the last fifteen years. No doubt still better results may be obtained, but as far as these experiments show—a plan based on that of the latest buildings put up in Alameda is the best for the eyes of the children.



The rooms in the Wilson School face the NW while the ones in the Encinal School face SW which, as both houses are built on practically the same plan, seems to indicate that a northern light is best for the eyes.

The windows used for light are all placed on one side of the room—which should be the largest—and the windows are equally spaced on that side and it should be one of the injunctions placed upon school architects that no consideration of outside grouping should interfere with this arrangement so good for distributing the light equally throughout the apartment.

The points in regard to lighting then are:

First.—Room to be lighted from one side.

Second.—That side to be the largest, or in other words, the further side of the room is to be kept within proper lighting distance of the window side.

Third.—North light.

Fourth.—Windows kept as near as possible to ceiling and high up from floor so that the light may reach better the opposite side of room.

Fifth.—Windows equally spaced.

W. J. Cuthbertson.

REPORT OF THE COMMITTEE APPOINTED TO COLLECT DATA OF AUTHENTICATED TESTS ON WASHINGTON BUILDING MATERIALS.

To the Hon. President and Members of the Washington State Chapter of the A. I. A.

Gentlemen:—Your Committee respectfully presents the following report, and begs to call the attention of the Chapter to the fact that, in so important a matter as that in hand, being in fact the very foundation from which the Architect and Engineer work, the time has been much too short to give anything but a meagre report, and one which in the estimation of your Committee, must fall far below the requirements.

For information in regard to Washington stone, the Committee have to gratefully acknowledge the courtesy of Colonel Prindle, now Chief Engineer at the Brooklyn Navy Yard, and recently Chief at the Port Orchard Dry Dock, also Mr. H. L. Copeland, Architect in charge of the State Capitol Building at Olympia. For information in regard to clay building materials and lumber, the same acknowledgments are due to Mr. Thomson, C. E., City Engineer of Seattle, Mr. C. B. Talbot, C. E. of Tacoma, a member of the Chapter, The Puget Sound Lumberman, and the Denny Clay Company.

STONE.

Under the above heading your Committee finds that all kinds of stones under the scientific classifications as Siliceous, Argillaceous and Calcareous are found in vast abundance in the State of Washington. We regret to have to report, however, notwithstanding the amount of building that has been done, that for the most part the so called quarries from which stone is supplied, are little better than undeveloped facings from which stone has been taken only in the crudest way by blasting; a system to be condemned, being injurious to good building stone in that it shakes it, besides causing considerable waste. Exception to these remarks may be made as to the Tenino Stone Quarry.

For the most part the building stones so far used in Western Washington are of the Siliceous order. We herewith submit the record of tests we have gathered, made for the most part by the U. S. Government at the Watertown arsenal:—

ORDANCE DEPARTMENT, U. S. A. REPORT OF MECHANICAL TESTS MADE WITH THE U. S. TESTING MACHINE, CAPACITY 800,000 POUNDS, AT WATERTOWN ARSENAL, MASS., JULY 7th, 1894. FOR HENRY ROEDER, CHUCKANUT, WASH.

Tests by Compression.—Bellingham Bay Stone, from Chuckanut Quarries.

Compressed surfaces faced with plaster-of Paris to secure even bearings in the testing machine.

Test No.	Dimensions Height Inches	Compressed Surface Inches	Inches	Sectional Area Sq. Inches	First Crack Lbs.	Ultimate Strength Total Lbs.	Per Sq. In. Lbs.
7178	3.99	4.22	4.20	17.72	179,000	182,100	10,276
7179	4.09	4.13	4.20	17.35	183,000	221,900	12,790
7180	4.20	4.21	4.23	17.81	192,000	197,700	11,100

Correct:
J. E. Howard.

J. W. Reilly,
Major Ord. Dept. U. S. A.
Commanding.

THE VULCAN IRON WORKS.

Seattle, Wash., Nov. 5, 1894.

Northern Construction Co., Tacoma, Wash.

Gentlemen:—We have this day tested three pieces of stone for you with the following results:—

Piece of White Sunset,	$2\frac{1}{2}$x$2\frac{1}{2}$x4,	Ultimate Resistance,	5891 lbs.	per sq. inch.
" Buff "	$1\frac{1}{2}$x$1\frac{1}{2}$x4,	" "	7199 "	"
" Pittsburg,	$2\frac{1}{2}$x$2\frac{1}{2}$x4,	" "	5886 "	"

Yours very truly,
The Vulcan Iron Works Co.,
Per J. Hulme,
Manager.

Test No. 7175, made by the U. S. testing machine at Watertown Arsenal, Mass., July 6, 1894, on Olympia sand-

stone from the Olympia Sandstone Quarry crushed at 13,441 lbs. per sq. inch.

COMPRESSION TESTS OF VARIOUS ROCKS. MARCH 30, 1890

Nos. 1 and 2.—Vanc. Granite Quarries (Dog Fish Point Sandstone Quarry) Light Grey. Show no sign of cracking at 5000 lbs. per sq. inch.

Nos. 3 and 4.—New Castle Island Stone. Light Grey. No. 3 cracked at 4800 lbs. per sq. inch. No. 4 cracked at 4750 lbs. per sq. inch.

Nos. 5 and 6.—Bellingham Bay. Blue. Show no signs of cracking at 5000 lbs. per sq. inch.

Nos. 7 and 8.—Eureka Sandstone Quarry. Blue. No. 7 shows no sign of cracking at 5000 lbs per sq. inch. No. 8 cracked at 4985 lbs. per sq. inch.

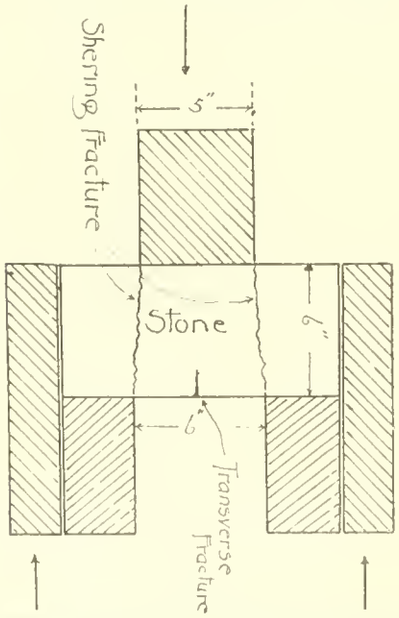
Nos. 9 and 10.—Wilkson Stone. Light Grey. No. 9 shows no sign of cracking at 5000 lbs. per sq. inch. No. 10 cracked at 4975 lbs. per sq. inch.

Nos. 11 and 12.—Tenino Blue. No. 11 cracked at 3025 lbs. crushed at 3855 lbs. per sq. inch. No. 12 cracked at 2990 lbs. crushed at 3475 lbs. per sq. inch.

Nos. 13 and 14.—Tenino Buff. No. 13 cracked at 3010 lbs. crushed at 3525 lbs. per sq. inch. No. 14 cracked at 3275 lbs. crushed at 3875 lbs. per sq. inch.

Tests made with cubes of 1 inch square, testing machine only works to 5000 lbs. pressure, therefore crushing not shown except where it fell below that amount.

CHUCKANUT SHEARING TESTS.



Test No.	Description.	Shearing Dimensions.	Shearing Area.	Transverse fracture developed on tension side.	Shearing Strength. Total	Shearing Strength. Per sq. in.	Surfaces Sheared.
		L.&c. x	Sq. In.	Lbs.	Lbs.	Lbs.	
261	Chuckanut Stone.	6.3" x 8.2"	52.37	27,600	70,800	1352	Two

Correct:
J. E. Howard.

J. W. Reilly,
Maj. Ord. Dept. U. S. A.
Commanding.

SANDSTONES OF WASHINGTON.—ASSAYS.

	Puyallup.	Sunset.	Tenino.
Silica,	71.21 per cent	85.25 per cent	71.00
Iron,	3.42	1.58	6.65
Alumina,	1.96	9.60	15.01
Magnesia,	.11	.25	1.05
Lime,	.12	.35	3.61
Soda,	3.21	2.14	
Potosia,	.61	2.35	

H. L. COPELAND,
Representing Ernest Flagg, Architect,
State Capitol Bldg., Olympia, Wash.

PUGET SOUND NAVAL STATION, PORT ORCHARD,
WASH., NOV. 29. 1894.

GENTLEMEN:—Answering your inquiry of 9th inst., as to what tests, if any, have been made by the Government authorities, of materials found in the State of Washington, in connection with the work in progress here, etc., I beg to state that, so far as I am informed, only some analyses of Tenino Sand Stone have been made, by Medical Director Wales, U. S. N., in charge of the Museum of Hygiene, at Washington, D. C., with the following results:

	No. 1.	No. 2.
Silica,	96.70 per cent	87.30 per cent.
Alumina,	.38	1.24
Iron Oxides,	.87	1.20
Lime,	1.24	8.62
Undetermined,	.82	1.64
Specific Gravity,	2.49	2.50

Both samples are of blue-gray color, and the cementing material is chiefly calcium carbonate. The hardness of No. 2 is greater than that of No. 1, and altogether I consider No. 2 the more suitable for building purposes.

Constant action of the sea water will in time tend to dissolve the cementing material and allow the stone to crumble.

Very respectfully,

F. C. PRINDLE,
Civil Engineer, U. S. N.

To
CHARLES W. SAUNDERS and
CHARLES H. BEBB,
) Committee on
Tests of Washington
Bldg. Materials.
Bailey Building,
Seattle, Wash.

Of the Granites by far the largest quantity so far used in this part of the State has been supplied from the Nelson Is. B. C. quarry. We understand that a granite quarry has been opened at Index on the Great Northern R. R. While the quality of this granite appears good as far as your Committee knows, it has not been officially tested.

It has become very evident to your Committee after the necessarily limited investigation into the subject of stone that the known data is entirely inadequate. The necessity of reliable official tests being of such importance, your Committee would respectfully advise that a new Committee, representing in themselves the Eastern as well as the Western sections of this State, be appointed. That they prepared a blank form of required tests which should comprise, crushing strength, specific gravity, absorbtion and a simple acid test for weathering qualities; that such form be sent by them to each and every working quarry in the State, with a request that each quarry have their stone tested by some well known authority, preferably by the U. S. Government at the Watertown Arsenal, and the result filled in the form furnished, and returned to the Secretary of the Chapter. We believe that every quarry owner will gladly embrace the opportunity to place such information in the hands of the Engineers and Architects of this State from purely business motives, and thus afford the means of giving Washington Stone a standard reputation.

In conclusion under the heading of Stone, your Committee would suggest that the following resolution be submitted to the Chapter:

RESOLVED: That the Washington State Chapter of the A. I. A. now convened at its first annual meeting express it as their opinion that the use for building purposes of freshly quarried stone, unseasoned and full of moisture or quarry sap is detrimental alike to the best interests of the building, the quarry and the Architect.

RESOLVED.—That the members of the Washington Chapter

will give the preference as far as in their power lies for stone which has been duly quarried and seasoned, and that they will do all in their power to encourage the system of using quarried stone only.

To Be Continued.

THE EXAMINATION FOR ADMISSION TO CANDIDATURE: AN HISTORICAL NOTE.

WITH the new Year of Grace the system of Progressive Examination for admission to candidature as Associate has come into full force. Every aspirant for such position must henceforth qualify for registration (1) as Probationer, (2) as Student, and (3) as Candidate for Associateship; and this can only be done by passing three distinct examinations or tests of competency. There are still more than one hundred men, relegated to their studies from previous examinations, who have the right of admission after passing the single Qualifying (now the "final") Examination. It is still possible, in the case of architects in practice and chief assistants, to apply for exemption from qualifying as Probationer and Student; and the privilege will endure for a time. But, for the youth of the profession, admission to candidature as Associate is now only obtainable after satisfying the Council of the Institute in the Preliminary, Intermediate, and Final stages, respectively, of the Examination in Architecture.

As more than a generation has come and gone while the events leading to this result have matured, it may be useful, and perhaps not uninteresting, especially at the present time, to recall the more prominent of them.

Some forty years ago a French architect printed an Essay, a copy of which he presented, entitled *Du Diplome d'Architecte*. He discussed the state of the question at that time, the compatibility of a diploma with the profession of architect, what should be the character of the diploma, and how it should be established. A Paper on this subject, which was to a great extent an abstract of Lance's Essay, was prepared by the late J. Woody Papworth and read before the Institute on the 19th of November, 1855. The discussion which followed, and the lively interest taken in it by *The Builder*, then conducted by the late George Godwin, at that time a member of the Institute Council, caused a slight flutter among the chiefs of the profession; and the discussion was resumed at a General Meeting held 3d December, 1855, when a Vice-President, the late Sir William Tite, who occupied the Chair, opened the proceedings by stating that the Council had received a Memorial from the Architectural Association (London) in favour of a professional examination and diploma.

The text of this memorial, which was signed by the President of the Association, the late Alfred Bailey, and the two Hon. Secretaries, is as follows:—

Your memorialists, representing the younger members of the architectural profession, beg to lay before the Royal Institute of British Architects their desire for the establishment of an Examination, which may eventually serve as the basis for the issue of such a diploma as shall certify that the holder thereof is fully qualified to practice as an architect.

They have been induced to take this step from the consideration of the difficulties which, in the present day, beset the early stages of architectural education.

In preparation for entrance upon their articles, in studies during the period of their sojourn in an office, and in the critical interval from the completion of their articles to the moment of commencing practice, the students of architecture are without sufficient guidance. In no case have they that important and valuable direction given to their several studies which is found to be so successful an inducement to the complete mastery of other professions; and this evil produces its more important effects when students of architecture, having completed their articles, commence practice on their own responsibility.

The want of proper knowledge on the part of the architect, combined as it is with a want of information on the part of the public, leads to many of the anomalies which are now so frequently observable in the practice of the profession, and to the presence in its ranks of many who have not the power, and in some cases of those who have not the will, to uphold its credit.

So much attention has been lately turned towards the necessity of testing by examination the competency of all candidates for public employment, that your memorialists are led to submit that the present is a highly opportune period for bringing the subject under your consideration. They feel that they are addressing those who represent the architectural profession, and by whom only an authoritative step towards the establishment of an Examination, or the granting of a Diploma, could be taken. They are also assured that the senior members of the profession could hardly take the initiative till the necessity for that course had been brought before them by those who have more recently entered the profession.

Your memorialists do not feel themselves called upon to enter into further details, because they are convinced that the members of the Institute must, from their position, be fully cognisant of the evil results of the present system; and, therefore, do not doubt that the Council will take an early opportunity of organising an Examination such as shall be found best calculated to aid and direct the student, and to bring the real qualifications of the architect before the public.

On the 14th January, 1861, at a Special General Meeting of the Institute, when a Vice-President, Mr. (afterwards Sir) M. Digby Wyatt, occupied the Chair, it was announced that the Council, having communicated with several non-Metropolitan Societies, and with the Architectural Association (London) on the subject of an Examination, had received replies generally to the effect that it was desirable to afford an opportunity for a voluntary professional examination. In the discussion which ensued a motion, proposed by the late J. W. Papworth and seconded by Professor Kerr [*F.*] was put and carried, as follows:—"That this Institute, by the publication of the Resolution* of the 25th June, 1860, and by the circulation of the propositions submitted by the Council at that time, having, to the utmost of its power, ascertained the views of the profession thereon, and having taken into consideration the replies forwarded by the various Societies, does, in conformity with the wishes expressed in these communications, take upon itself the labour of constituting an Examination tending to promote a systematic professional education." After further discussion, in which the late George Edmund Street took part, Professor Kerr moved, and the late William Burges seconded, "That the Council be instructed to proceed with the preparation of a Curriculum and By-Laws, and be recommended to appoint a Committee to this end, and to report to a General Meeting."

In May 1862 was published a paper of *Regulations and Course of Examination, with Forms of Declaration and Recommendation, for the Voluntary Architectural Examination*, which was divided into two classes—a "Class of Proficiency" and a "Class of Distinction;" and applicants for admission to either class were required to submit "Preliminary work." In January 1863 nineteen persons applied to be exained inm the class of Proficiency and two in that of Distinction. Fourteen were admitted, the preliminary work of four being

* The words of the Resolution unanimously passed at the General Meeting of 25th June 1860 were "That it is desirable to afford an opportunity for a voluntary professional examination."

deemed insufficient, to the Proficiency Class. The late Arthur Ashpitel, the late Sir G. G. Scott, and the late Sir Digby Wyatt were appointed Examiners; the late J. W. Papworth and Professor T. Roger Smith [*F.*], then an Associate, were appointed Moderators. Out of the fourteen applicants, eight passed. The Examiners' Report concluded with congratulations to the Council "upon the healthy stimulant to study which, we cannot but feel, must attend upon exertions made in the spirit displayed by the candidates for examination on this highly auspicious first trial of a system likely to produce hereafter, we fully believe, considerable benefits to the profession."

In 1864 eighteen persons applied. Thirteen were admitted to the class of Proficiency, and seven passed; two were admitted to the class of Distinction and passed. The Examiners were Ashpitel, Scott and Professor T. Hayter Lewis [*F.*]; the Moderators, J. W. Papworth and Mr. Charles Fowler [*F.*].

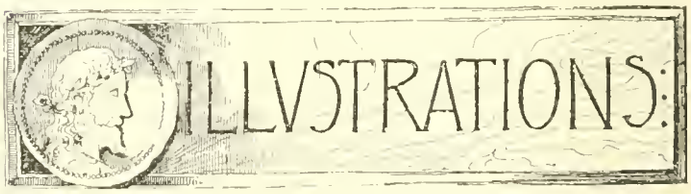
In 1865 there were only four applications, and no examination was held. In 1866 there were six applicants, and four were admitted to the class of Proficiency, all of whom passed. In 1867 no examination was held, only four persons having applied. In 1868 there was one application and no examination was held. In 1870 there were nine applicants for admission to the class of Proficiency, of whom seven were admitted and four passed. In this year was held the first of the Preliminary Examinations established by Resolution on the 21st June 1869, with the proviso that the passing of them was not compulsory on those who came up for the classes of Proficiency and Distinction in the Voluntary Architectural Examination. In 1872 there was one application to be admitted to the class of Proficiency. In 1873, after the programme of the Examination had been divided into artistic and scientific sections, there were five applicants, three of whom passed in both sections, and one in Art only, another in Science only. In 1875 there were six applicants, two of whom passed.

In 1880 twenty persons, some of whom had passed in one or other section of the Examination, presented themselves in the class of Proficiency, and six passed. In June 1881 was held the last Voluntary Architectural Examination, when four persons were examined and passed.

In the course of nineteen years there had been held ten examinations in the class of Proficiency, and forty-three persons had passed, three of them having also passed the class of Distinction. The passed candidates in the Preliminary class (1870–79) numbered 47; and two of these received the Ashpitel Prize: Mr. J. F. Hennessy in 1875, and Mr. John Bilson [*F.*] in 1877.

That in the course of nineteen years, from 1863 to 1881, both inclusive, not more than a hundred persons thought it worth while to apply for admission to the class of Proficiency in the Voluntary Architectural Examination, that only five students per annum could be induced to enter for this examination, less than half of whom were proved competent to pass it, was discouraging. Apart, however, from examinations, the seventies were not years of prosperity to the Institute, and it is not extraordinary that more than one special committee should have met to consider its affairs and its general improvement as a working professional body. In 1877 the Past Presidents and Past Vice-Presidents were invited by the general body to assist the Council, to use the late John Whichcord's words, "Not so much in improving the method of our work, as in arousing a spirit of earnest energy within our ranks." It was then that the By-Laws made under the Original Charter were revised with considerable care and acumen; and there was passed a new By-Law,* to the effect that, after May, 1882, no person should be admitted to candidature as Associate without first passing an examination. Mr. Charles Barry [*F.*] was then President, and to him succeeded the late John Whichcord, whose two years of office must always be regarded as having been of vital importance to the interests of the Institute regarded as the representative body of the profession, and to those of the Examination which was to come into effect in 1882. Whichcord, who became President in 1879, took the Chair at all the meetings—the first of which was held 4th July 1879—of the Special Committee for Examinations, whose Report, prepared by Mr. J. Douglass Mathews [*F.*] and Mr. H. L. Florence [*F.*], was passed in February 1880. To them succeeded the "Architectural Examinations Committee," whose first meeting took place 3d June 1880, when Mr. Arthur Cates [*F.*] was appointed Chairman and Mr. R. Phene Spiers [*F.*] Hon. Secretary. Their report was brought up at the seventh meeting; and at the eight the scheme of Examination under By-Law XIV. was passed. Their report contained the Regulations, Programme, Forms of Application, etc., in the new Examination, which were approved by the Institute on the 6th January 1881, after the Meeting had made a remarkable alteration in the Examination Programme. The Committee appointed the year before to work out the scheme, the heads of which were incorporated in the Council Report of 1880 and approved by the Institute, had not ventured to include in their programme a complete test of architectonic aptitude. They had omitted all attempt to fully examine in "Design." The Committee had recommended, and the Council had approved, that two hours and a half of one of the three days given to the Written and Graphic Examination should be devoted by the examinees to making "the plan of a building with the details of arrangement for a selected purpose, adapted to a particular site"—the outline of the said site and a statement of requirements to be prepared for the guidance of the examinees. The Institute approved this with the proviso that the words "section and elevation" should be inserted after the word "plan."

To be continued.



The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

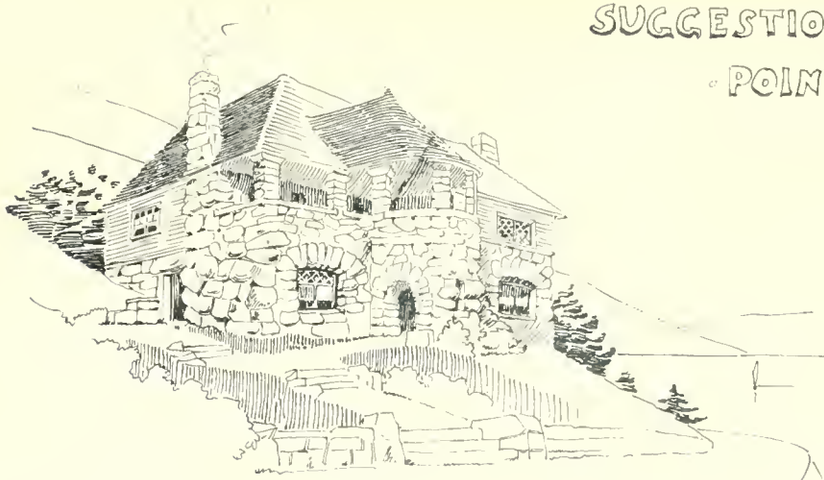
COMPETITIVE Design for Alameda School House, Hermann & Swain, Architects.

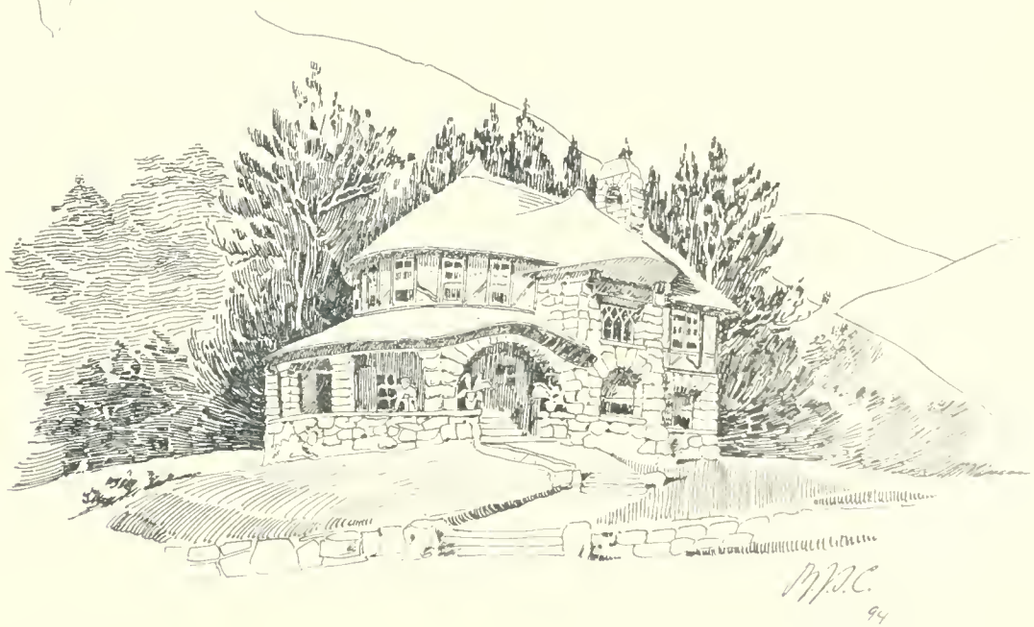
SUGGESTIONS in Stone, Point Tiburon, J. L. Cahill, Del.

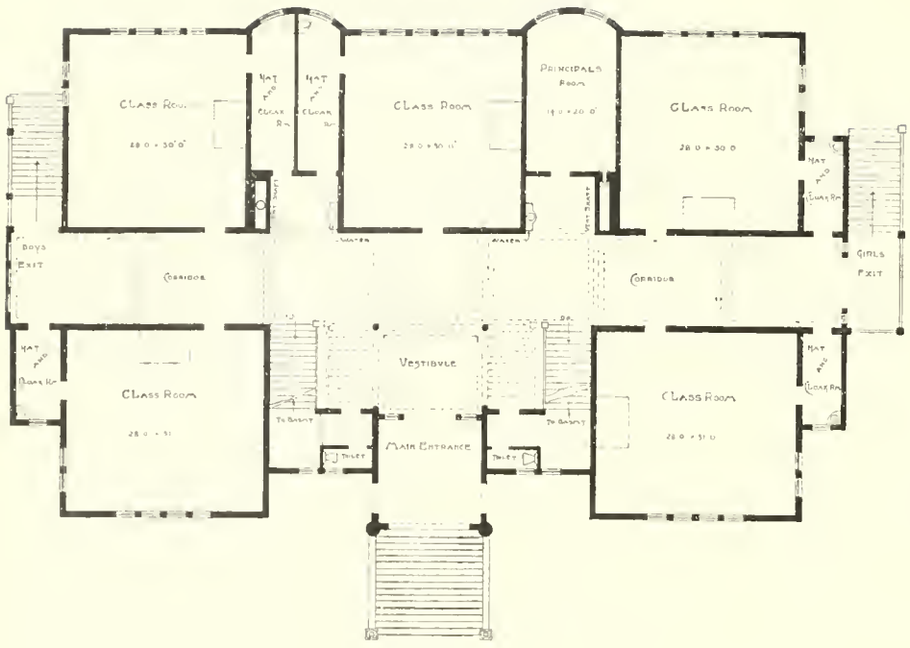
EARLY San Francisco Architecture, Green near Stockton street, T. O'Connor.

* This was By-Law XIV., which was thus worded:—All gentlemen engaged in the study or practice of civil architecture, before presenting themselves for election as Associates, shall, after May 1882, be required to pass an examination before their election, according to a standard to be fixed from time to time by the Council.

SUGGESTIONS IN STONE - POINT TIBURON





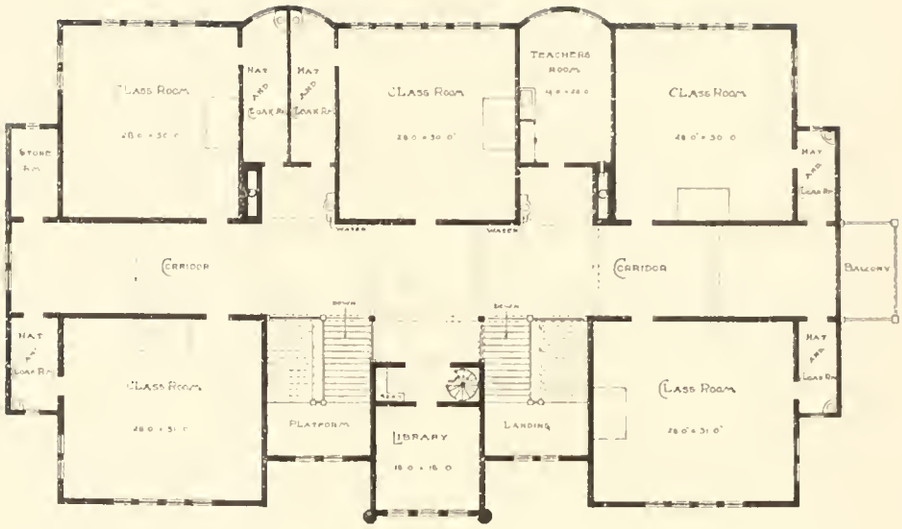


First Floor Plan

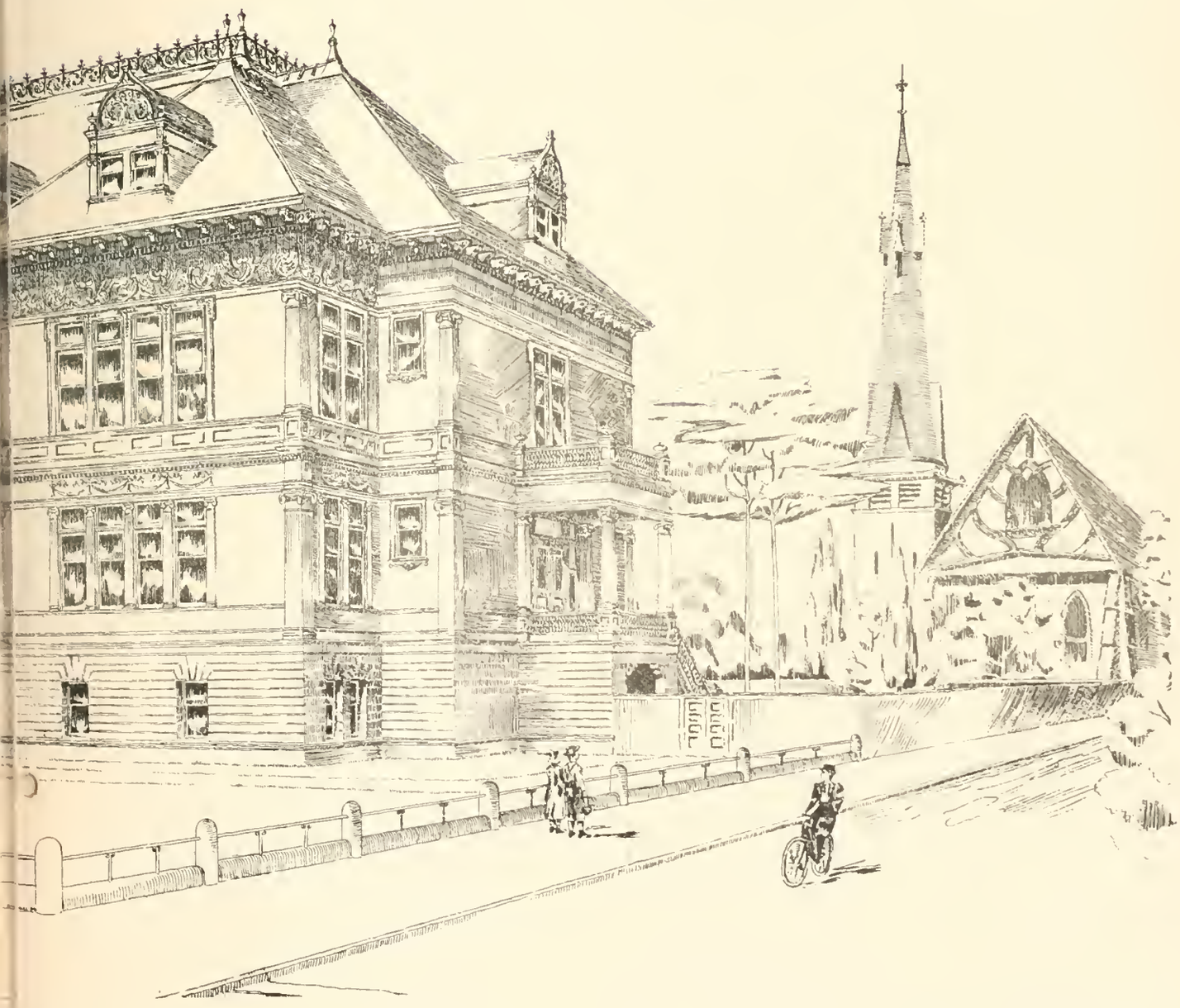
Competitive Design for Alameda School House

Nermann & Swain, Architects.

Britton



Second Floor Plan



RE PHOTO. LITH.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO

BRITTON & REY PHOTO. LITH.

VOL. XVI Nº 2 FEBRUARY 1895

EARLY SAN FRANCISCO ARCHITECTURE
GREEN NR STOCKTON STREETS

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 108 California street.
Seth Babson, Pres. Geo. W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

SOUTHERN CALIFORNIA CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE regular semi-annual meeting of the Southern California Chapter of the American Institute of Architects, was held Wednesday evening, February 6, 1895.

The Treasurer's report was read and showed the finances to be in good condition; other reports are to be submitted at the semi-annual banquet to be given shortly. The report of the committee to act in regard to the Legislative Bill to regulate the practice of architecture in the State was given, and the same committee, Messrs. Morgan, Preston and Benton was authorized to send another delegation to the Capitol if in their judgment such action was necessary.

The report of the special committee on banquet was received, and the committee continued.

The semi-annual election of officers resulted in the re-election of Octavius Morgan to his fourth term as President, and the re-election of Messrs. Edelman and Wackerbarth, Vice-President and Treasurer respectively. The Secretary and Corresponding Secretary are elected at the annual meeting in August.

The new board of directors are Messrs. Morgan, Edelman, Benton, Wackerbarth, Aiken, Burton, Preston and Walls.

BUILDERS' CONTRACT OF THE BUILDERS' EXCHANGE OF SAN FRANCISCO, CALIFORNIA.

ARTICLES OF AGREEMENT.

MADE this——day of——one thousand eight hundred and———between———of the———County of——, State of California, the part of the first part, and——— of the——County of———, State of California, the part of the second part.

WITNESSETH:—The part of the first part will be hereinafter designated as the Owner, and the part of the second part as the Contractor, singular number only being used; and the word Architect used herein in the singular shall include the plural, and the masculine the feminine.

First.—The Contractor agrees, within the space of—— working days from and after———to furnish the necessary labor and materials, including tools, implements and appliances, required, and perform and complete in a workmanlike manner all the———and other works shown and described in and by, and in conformity with the plans, drawings and specifications for the same made by——— the authorized Architect employed by the Owner, and which are signed by the parties hereto.———

Second.—Said Architect shall provide and furnish to the Contractor all details and working drawings necessary to properly delineate said plans and specifications; and the work is to be done and the materials furnished in accordance therewith under the direction and supervision and subject to the approval of said Architect, or a superintendent selected and agreed upon by the parties hereto, within a fair and equitable construction of the true intent and meaning of said plans and specifications.

Third.—The time during which the Contractor is delayed in said work by the acts or neglects of the Owner or his employees, or those under him by contract or otherwise, or by the acts of God which the Contractor could not have reasonably foreseen and provided for, or by stormy and inclement weather which delays the work, or by any strikes or like trouble among mechanics or laborers which delay said work and which are not caused by, or the continuance of which is not due to any unreasonable acts or conduct on the part of the Contractor, shall be added to the time for completion as aforesaid.

Fourth.—Said building———to be erected upon a lot of land situated in———County of———, State of California, and described as follows:—

Fifth.—The Owner agrees, in consideration of the performance of this agreement by the Contractor, to pay, or cause to be paid, to the Contractor, his legal representatives or assigns, the sum of———dollars in United States Gold Coin, at the times and in the manner following, to wit:—

Provided, that when each payment or installment shall become due, and at the final completion of the work, certificates in writing shall be obtained from the said Architect, stating that the payment or installment is due or work completed, as the case may be, and the amount then due; and the said Architect shall at said times deliver said certificates under his hand to the Contractor, or, in lieu of such certificates, shall deliver to the Contractor, in writing, under his hand, a just and true reason for not issuing the certificates including a statement of the defects, if any, to be remedied, to entitle the Contractor to the certificate or certificates. And, in the event of the failure of the Architect to furnish and deliver said certificates, or any of them, or in lieu thereof the writing aforesaid, within three days after the times aforesaid, and after demand therefor made in writing by the Contractor, the amount which may be claimed to be due by the Contractor, and stated in the said demand made by him for the certificate, shall, at the expiration of said three days, become due and payable, and the Owner shall be liable and bound to pay the same on demand.

In case the Architect delivers the writing aforesaid in lieu of the certificate, than a compliance by the Contractor with the requirements of said writing shall entitle the Contractor to the certificate.

Sixth.—For any delay on the part of the Owner in making any of the payments or installments provided for in this contract after they shall become due and payable, he shall be liable to the Contractor for any and all damages which the latter may suffer; and such delay shall, in addition, operate as an additional extension of the time for completion aforesaid for the length of time of such delay. And such delay, if for more than five days after the date when said payments or installments shall have respectfully become due and payable, as in this agreement provided, shall, at the option of the Con-

tractor, be held to be prevention by the Owner of performance of this contract by the Contractor.

Seventh.—The specifications and drawings are intended to co-operate, so that any work exhibited in the drawings and not mentioned in the specifications, or *vice versa*, are to be executed the same as if both mentioned in the specifications and set forth in the drawings, to the true intent and meaning of the said drawings and specifications when taken together. But no part of said specifications that is in conflict with any portion of this agreement, or that is not actually descriptive of the work to be done thereunder, or of the manner in which the said work is to be executed, shall be considered as any part of this agreement, but shall be utterly null and void.

Eight.—Should the Owner or the Architect, at any time during the progress of the work, request any alterations or deviations in, additions to, or omissions from, this contract or the plans or specifications, either of them shall be at liberty to do so, and the same shall in no way affect or make void this contract; but the amount thereof shall be added to, or deducted from, the amount of the contract price aforesaid, as the case may be, by a fair and reasonable valuation. And this contract shall be held to be completed when the work is finished in accordance with the original plans, as amended by such changes, whatever may be the nature or extent thereof.

Ninth.—The rule of practice to be observed in the fulfillment of the last foregoing paragraph (eight) shall be that, upon the demand of either the Contractor, Owner or Architect, the character and valuation of any or all changes, omissions, or extra work, shall be agreed upon and fixed in writing, signed by the Owner or Architect and the Contractor, prior to execution.

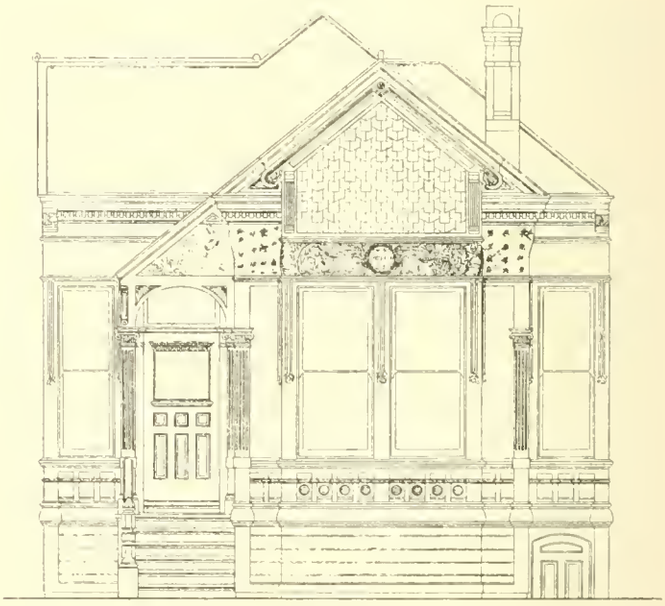
Tenth.—Should any dispute arise between the Owner and Contractor, or between the Contractor and Architect, respecting the true construction of the drawings or specifications, the same shall, in the first instance, be decided by the Architect; but should either of the parties hereto be dissatisfied with the justice of such decision, or should any dispute arise between the parties hereto respecting the valuation of the extra work, work done, or work omitted, the disputed matter shall be referred to, and decided by, two competent persons who are experts in the business of building,—one to be selected by the Owner or Architect, and the other by the Contractor; and in case they cannot agree, these two shall select an umpire, and the decision of any two of them shall be binding on all parties.

Eleventh.—Should the Contractor fail to complete this contract, and the works provided for therein, within the time fixed for such completion, due allowance being made for the contingencies provided for herein, he shall become liable to the Owner for all loss and damages which the latter may suffer on account thereof, but not to exceed the sum of $——per day for each day said works shall remain uncompleted beyond such time for completion.

Twelfth.—In case said work herein provided for, should, before completion, be wholly destroyed by fire, defective soil, earthquake or other act of God which the Contractor could not have reasonably foreseen and provided for, then the loss occasioned thereby shall be sustained by the Owner to the extent that he has paid installments thereon, or that may be due under the fifth clause of this contract; and the loss occasioned thereby and to be sustained by the Contractor, shall be for the uncompleted portion of said work upon which he may be engaged at the time of the loss, and for which no payment is yet due under said fifth clause of this contract.

In the event of a partial destruction of said work by any of the causes above named, then the loss to be sustained by the Owner shall be in the proportion that the amounts of installments paid or due bears to the total amount of work done and materials furnished, estimated according to said contract price, and the balance of said loss to be sustained by the Contractor.

Thirteenth.—The payment of the progress-payments by the Owner, shall not be construed as an absolute acceptance of the work done up to the time of such payments; but the entire work is to be subject to the inspection and approval of the Architect or Superintendent at the time when it shall be claimed by the Contractor that the contract and works are completed; but the Architect or Superintendent shall exercise all reasonable diligence in the discovery, and report to the Contractor as the work progresses, of materials and



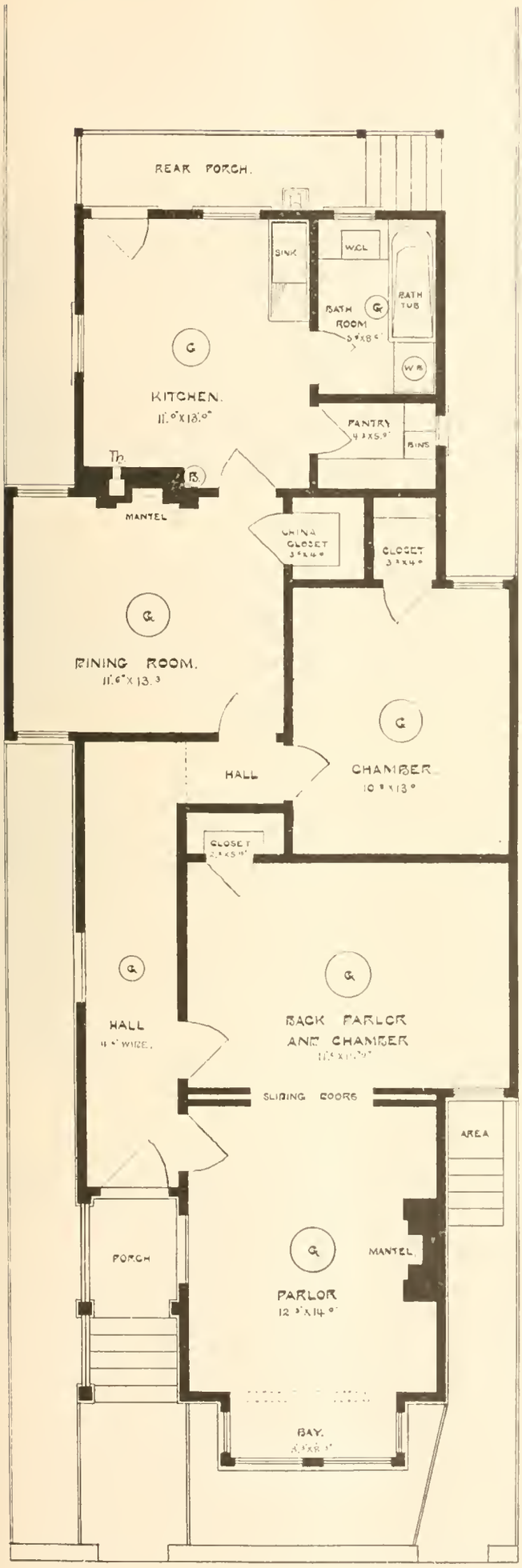
FRONT ELEVATION.

labor which are not satisfactory to the Architect or Superintendent, so as to avoid unnecessary trouble and cost to the Contractor in making good defective parts.

Fourteenth.—Should the Contractor at any time during the progress of the work, refuse or neglect, without the fault of the Owner, Architect or Superintendent, to supply sufficiency of materials or workmen to complete the contract within the time limited herein, or any lawful extension thereof, for a period of more than three days after having been notified by the Owner in writing to furnish the same, the Owner shall have power to furnish and provide said materials or workmen to finish the said work; and the reasonable expenses thereof shall be deducted from the amount of the contract price.

In Witness Whereof, the said parties to these presents have hereunto set their hands and seals, the day and year first above written

——————[SEAL]



FLOOR PLAN

BOOKS AND PERIODICALS.

SAN FRANCISCO MUNICIPAL REPORTS for the fiscal year 1893–1894 ending June 30, 1894, published by order of the Board of Supervisors of San Francisco. In addition to the official reports this volume contains two pages of illustrations, the portrait of Mayor L. R. Ellert, as well as those of the twelve Supervisors from M. Goodwin of the First ward to James Denman of the Twelfth.

The always welcome ANNUAL REPORT OF THE BOARD OF REGENTS of the Smithsonian Institution, showing the operations, expenditures and condition of the Institution to July, 1893. Our space will not admit of a mention of all the interesting reports contained in this volume; among others that attracted our attention was an article entitled "North American Bows, Arrows and Quivers," by Otis Tufton Mason, fully illustrated, also "Deep-Sea Deposits" by A. Daubree being a review of work of the Challenger Expedition translated from *Journal des Savants*; "How Maps are Made" by W. B. Blakie, cannot fail to interest our geographical friends as well as the public in general; "The Age of the Earth" by Clarence King, but enough, the work must be carefully studied to appreciate its merits.

THE PHOTOGRAPHIC TIMES. An illustrated monthly Magazine devoted to the interests of artistic and scientific photography—published at 423 Broome street, New York.

In changing from a weekly journal to a monthly magazine we should judge by the first number that the publishers had made a very successful departure and are certainly to be congratulated for having produced such a beautiful magazine; many of the illustrations are little gems of art.

The amature photographer as well as the professional are under a debt of gratitude to the editor and publishers of this truly beautiful as well as useful publication, and should pay the debt by becoming subscribers.

FINAL REPORT OF THE CALIFORNIA WORLD'S FAIR COMMISSION, including a description of all Exhibits from the State of California, collected and maintained under Legislative enactments at the World's Columbian Exposition, Chicago, 1893. The Fair Commissioners are to be congratulated upon having given to the public such a handsome volume and with closing their labors in such a creditable manner. In a letter to Gov. H. H. Markham transmitting their report, we notice the following, that certainly is very creditable to our State, with the single exception of that of Illinois, the California building was the largest State building on the Exposition grounds. While maintaining a distinct exhibit in nearly all of the departments or national buildings, such as the Horticultural, Mining, Agricultural and Forestry, the State displayed in her own building so extensive an aggregation of her own products that it was often referred to collectively as "California in miniature," and as an "Exposition in itself."

The illustrations are good and convey a very convincing idea of what California did to represent herself at the World's Columbian Exposition.

WHAT IS NEEDED TO COMPLETE THE CITY HALL.

FROM a report by Architect Shea we take the following detailed statement of the work that will have to be done to complete the New City Hall:

FIRST.—A permanent fire-proof roof, covering the entire building with the exception of the Hall of Records.

SECOND.—The carrying up of all the main interior walls to a proper height, a satisfactory system of ventilation introduced and all smoke-flues raised above the line of roof-ridges, with all necessary capping, etc.

THIRD.—The performance of all work necessary to complete in every particular the inner dome and rotunda, which includes the placing of an ornamental glass dome at the head of the present interior circular colonnade, all window-glazing, etc., the building of a circular gallery on the line or on the level of each floor of the main building and all ornamental work such as cornices, capitals, railings, wainscoting, pavements, staircases, etc., together with an elevator in the shaft adjoining the rotunda on the westerly line, and continuing to the top of the dome. Three rooms should also be provided in the square shaft on the easterly line adjoining the office of the Mayor and the Board of Education, together with all necessary decorations.

FOURTH.—The general reparing of all injured work in rooms, and especially in the corridors, throughout the entire building.

SIXTH.—Providing for each court-room a steel vault for the reception of valuable documents.

SEVENTH.—Repairing all exterior cast iron work, such as columns, capitals and other minor ornamentations which at this date show the need of such attention.

The cost of the above mentioned work is as follows:

Fire-proof roof	$165,000
Attic, walls, flues, skylights and ventilation	55,000
Inner dome and rotunda complete	65,000
Elevator from first floor to top of dome	11,000
Repairing of all work in rooms and corridors	5,000
Plumbing repairs	6,000
Steel vaults	4,000
Painting, etc	5,000
Total	$316,000
Total cost of building to date	$5,049,000
Estimated cost of building, complete	$5,465,000

LEGAL DECISIONS.

LIABILITY OF ACCEPTOR. Where a contractor entered into a written contract for the erection of a building, and gives an order on the owner in favor of a material man who was furnishing materials for the erection of the building, in payment or security for such materials, payable when the next payment on the contract becomes due, which order was accepted by the owner, in order that he might make such payment or give such security, and also to obtain credit for a further supply of materials for the same purpose and these facts being known to the owner. It was held the object of the acceptance being to assure the further progress of the completion of the contract for the erection of the building, that it established a good consideration as between the owner, and acceptor, and the drawee for the acceptance; and that, upon the completion of the contract to the next payment the owner became liable to pay the order thus accepted and that it was immaterial whether the contractor performed the remainder of the contract or not. If the acceptor of such an order chose to pay the contractor for the erection of the building, as if he had completed the contract to the next payment, he would be estopped from denying his liability in an action upon the acceptance when it became due and payable; and so where an order is drawn upon a fund to be paid upon the happening of a condition, which order is accepted, the acceptor cannot either by his own act or by acting in collusion with the drawer of the order, defeat the condition, and then set up such defeasance as a defense to an action upon the acceptance.

Herter v. Goss & Edsoll Co., Supreme Court of New Jersey, 30 At. Rep. 252.

LIABILITY FOR NEGLIGENCE OF FELLOW SERVANTS.—Where a workman is injured by the fall of a derrick occasioned by the neglect of another employe in charge of the derrick to provide a check rope, the master is not liable.

Jenkinson v. Carlin, City Court of Brooklyn, General Term, 30 N. Y. Supp. Rep. 530.

MECHANICS' LIENS UNDER AN ENTIRE CONTRACT.—Under an entire contract for the erection of buildings on lots not contiguous to each other, one claim for a mechanics' lien may properly be filed against both improved properties where the claimant of such lien contributed material or labor to both improvements.

Bohn Sash and Door Co. v. Case, Supreme Court of Nebraska, 60 N. W. Rep. 578.

RIGHTS OF ADJOINING OWNERS TO PARTY WALL.—An adjoining owner of a party wall has a right to increase its height; and where he contracts with an independent contractor to have this done in a lawful, proper and usual way, so that the work does not become, in itself, dangerous or extraordinary, and does not subject the existing wall to overweight, he is not liable for the damage incident to the falling of the wall through some accident.

Negus v. Becker, Court of Appeals of New York, 38 N. E. Rep. 290.

THE SUPREME COURT OF IOWA HOLDS, that one acting for an investment company in the construction of a building, under a written agreement requiring him to make all contracts for material and labor in his own name, and to be the party responsible thereon, receiving partial payment in the stock of the company, but reciting that the company desires to employ him "in the construction" of the building, and providing for the letting of contracts by him for work and material "subject to the approval of the company," requiring him to devote his whole time to supervision over such labor and materials, and to furnish the company with a statement of the cost of work and material, and providing that he shall receive ten per cent of the cost of certain labor and material "in full for his services in looking after the execution of said contracts and superintending and supervising the entire construction of the building," will be regarded as a servant of the company, and not an independent contractor.

Hughbanks v. Boston Inv. Co., 60 N. W. Rep. 640.

FACTS CONSTITUTING WAIVER OF ARCHITECT'S CERTIFICATE. By the terms of a building contract, a certificate was a condition precedent to payment, and upon the fact that such certificate had not been issued by the architect himself, was made the defense of the owner of the building to paying for the work done.

It appears that a certificate was presented, signed by the architect's name, per his assistant, and the claim was made that such certificate was ineffectual to entitle the contractor to payment. But it appeared that the architect with the acquiescence of the owner substituted the assistant for himself in the preparation of the specifications and superintendence of the building; that the architect was never on the premises and never saw the work; that the architect authorized the assistant to issue the certificates; that the owner after making the contract never met the architect, and conducted all his business with the assistant; the extra work was planned and executed by the assistant; that when the latter proposed to furnish the final certificate, the owner made no objection to its issuance by him, but only solicited delay; that other certificates had been so issued and had been paid; and that when the final certificate was issued and presented, he accepted it without objection, and promised to settle next week. The contract also provided that that the contractor should permit anyone appointed by the architect to inspect the work. The court held, on the above statement of facts, that the owner had waived the condition of the contract as to the issuance of the certificate by the architect, and assented to the certificates by the assistant, as the clear conclusion of reason and justice.

McEntire v. Tucker, Court Com. Pl., 31 N. Y. S., 672.

BUSINESS MOSAICS.

The J. L. Mott Iron Works, New York, Boston, Chicago, St. Louis and San Francisco; if you refer to page v of this journal you will see what this firm claim to be "The desideratum in modern plumbing," that is to have the various appliances set up open and accessible and wherever possible without cabinet work.

It is only necessary to examine their work to be convinced of the truth of the claim, and every day people are coming to think the same way, as may be seen in the new houses that are constructed upon the most improved plans all contain this open work idea. Information and circulars will be furnished upon application at the San Francisco office, room 35 Flood building, M. S. James Pacific Coast Representive.

Tramp—"I ain't had nothin' to eat for a week, sir. Can't you do suthin for me?" PEDESTRIAN—"Certainly; fast for two months and I'll get you a place in a dime museum."—*Harper's Bazar.*

Joseph Budde, the manufacturer of sanitary appliances in the plumbing line is too well known, and has received so many medals and diplomas from the State Fair at Sacramento that it may seem useless to call attention to the excellence of his work, as the popular Golden Gate Patent Water Closet speaks for itself, we need only to call attention to the fact that Mr. Budde can always be found at his ware rooms, 575 Mission street. An inspection of his stock is all that is necessary to secure an order from those in want of his line of goods. See his advertisement on page vii of this journal.

New Yorker (in Washington)—"I have a gold piece in my pocket that—" Washington—"Ssh! Keep it dark." New Yorker—"Heavens! What's the matter?" Washington—"If Cleveland and Carlisle learn that it's there they'll want to borrow it."—*North American.*

California Art Glass Bending and Cutting Works.—The artistic manner in which this firm finishes church memorial windows is worthy of all praise, their exhibit in the Liberal Arts Building at the California Midwinter International Exhibition was awarded a first prize gold medal. If you visit their show room you will be convinced that what they do, is done well, any work intrusted to their care is sure to turn out to the satisfaction of their patrons. Wm. Schroeder is president of the company, 105 Mission street cor. Spear, San Francisco, Cal.

They have just engaged one of the most celebrated artists in glass staining in the United States, as he just comes from the east where he was employed by some of the largest art glass works, he is full of new ideas which will be an inovation on this coast.

She—"I hope, Oscar, you are not marrying me for my money?" HE—"Bless you no! My creditors will get all of that."—*Blaetter.*

The Joshua Hendy Machine Works, 39-51 Fremont street will furnish all kinds of castings, light and heavy, as well as architectural iron work; engines and pumps for buildings are also made specialties.

Facts about paint and Duresco the New Wall finish or washable color; this will certainly interest the ladies and therefore we can write about it with interest, what good housekeeper but is particular about her walls, and if she can find a wall finish, or washable water color that damp walls do not effect what more can she want, but in addition to these merits it is claimed by the manufacturers "It strengthens the wall and prevents crumbling" for further information on this subject call upon the manufactures, W. P. Fuller & Co., Pine and Front sts.

American Student—"You don't have football in Germany?" Germah Student—"No; the professors draw the line at duelling.—*Puck.*

Do not forget to specify "Samson Spot Cord" if you want a cord that will do good service, and also one that you can tell at a glance is the true article by its perfection of braid. Samson Cordage works, Boston, Mass., are the manufacturers of this valuable cord.

Judge—"You claim Mr. Coffin as a particular friend of yours?" Mrs. Killboys—"Yes, your honor; he buried two of my husbands.—*Judge.*

Kenney & Wells, 422 Sutter street, San Francisco, 408-410 Twelfth street, Oakland, is the place to go for parquetry floors, wood carpet, mirrors; frames and pictures, as well as fine fretwork and grills.

"It's the little things that tell," as the man said when his 3-year-old boy saw him kiss the cook and carried the news to mamma.—*New York News.*

W. R. Grace & Co., are agents for the famous Portland Cements "Josson" and "North" 203 California street, San Francisco. If you use cement, get the best, a word to the wise is enough.

Maud—"Don't you think that Mr. Totterly is too old to love?" MARIE—"I don't know. But he is rich enough to be loved."—*Ex.*

F. H. Rosenbaum & Co., depot of plate and window glass is at 567 Market street opposite Sansome, they also manufacture mirrors in both styles.

When a man becomes firmly convinced that he is a genius, it is then that the fringe slowly begins to form on the bottom of his trousers.—*Harlem Life.*

Thomas Day & Co., will supply you with gas or electric fixtures, and you are sure to get what you order at 222 Sutter street.

South Streeter—"Jakey, how do you spell fife?" Jakey—"Vot you dinkin' of, dot leedle flute or de mark on dem tree-tollar pants?"—*Ex.*

If you don't want your door to slam leave order with G. Rischmuller for his door opener and closer.

CITY BUILDING NEWS.

Broderick near Oak. To build; owner, J. D. Sullivan; architect, T. J. Welsh; contractor, Jno. Kemp; signed, Jan. 31; filed, Feb. 4; cost $2800.

California near Eugenia. To build; owner, John Geherty; architect, M. J. Welsh; contractor, J. E. Schultz; signed, Jan. 10; filed, Jan. 14; cost $1500.

California near Baker. Plumbing; owner, Mrs. C. F. Clark; architect, W. H. Wharff; contractors, Berwick & Spinck; cost $995.

California near Polk. Alterations and additions; owner, Harriett S. Campbell; architect, W. H. Lillie; contractor, Geo. R. Lang; signed, Jan. 15; filed, Jan. 16; cost $2100.

Castro near 19th. To build; owner, James Curley; architect, H. B. Roulett; contractors, Rountree Bros.; signed, Jan. 7; filed, Jan. 24; cost $3500.

Day near Sanchez. To build; owner, M. and E. Schumacher; architect, E. J. Vogel; contractors, Henderlong Bros.; signed, Jan. 25; filed, Jan. 29; cost $1600.

De Long Ave. near Frederick. To build; owner, Geo. D. Graham; architect, E. J. Vogel; contractor, M. J. Savage; signed, Jan. 11; filed, Jan. 14; cost $3130.

Eddy near Taylor. Alterations and additions; owner, Silas M. Locke; contractors, Riley & Loane; signed, Jan. 5; filed, Jan. 19; cost $2172.

Eddy near Taylor. Carpenter and plaster work; owner, Silas M. Locke; contractors, Riley & Loane; signed, Jan. 7; filed, Jan. 16; cost $1860.

Ellis near Scott. To build; owner, Mary A. Garness; architects, Townsend & Wyncken; contractor, D. Currie; signed, Jan. 14; filed, Jan. 15; cost $3890.

Florida near 25th. Additions to Clumbia Grammer School; owner, City of San Francisco; architect, T. J. Welsh; contractors, Constable & Hamilton; signed, Jan. 15; cost $3100.

Fourteenth near Folsom. To build flats; owner, Elizabeth Beck; contractor, H. R. Schmuckert; signed, Jan. 12; filed, Jan. 14; cost $4000.

Fulton near Pierce. Plastering, mill work, etc.; owner, Chas. E. Hansen; architect, W. Winterhalter; contractors, Schutt & Krecker; signed, Jan. 20; filed, Feb. 1; cost $10,880.

Fulton near Pierce. Painting, graining, etc.; owner, Chas. E. Hansen; architect, W. Winterhalter; contractor, Henry F. Wagner; cost $1520.

Fulton near Pierce. Excavation, stone; brick work, etc.; owner, Chas. E. Hansen; architect, W. Winierhalter; contractor, Adam Beck; signed, Jan. 31; filed, Feb. 1; cost $2900.

Fulton near Pierce. Sewers, plumbing, etc.; owner, Chas. E. Hansen; architect, W. Winterhalter; contractors, Sheperd Bros.; signed, Jan. 31; filed, Feb. 1; cost $1495.

Grove near Schrader. To build; owner, J. J. Butler; architect, F. Butler; contractor, J. Weir; cost $4500.

Greenwich near Hyde. To build; owners, Paul J. Stuparich and Emily Stuparish; architect, H. Hess; contractors, P. Carmouche & J. Maguire; signed, Jan. 30; filed, Feb. 1; cost $3200.

Haight near Steiner. To build; owner, Raymo Angelo; contractor, Arthur Stevens; signed, Feb. 4; filed, Feb. 4; cost $3800.

Harrison near 21st. To build; owner, Michael Bobino; architect, C. M. Rousseau; contractor, Jos. Kennedy; signed, Jan. 31; filed, Feb. 1; cost $3000.

Hayes near Broderick. Frame building; owner, Henry C. Cischen; architects, Martens & Colley; contractor, H. Behrens; signed, Feb. 4; filed, Feb. 8; cost $3390.

Java and Park Ave. To build; owner, Ella Megrane; architect, W. H. Armitage; contractor, C. Larsen; signed, Jan. 15; cost $2932.

Octavia and Hayes. Carpenter work and painting, owner, Mrs. Lizetta Reinle; architects, Stone & Cahill; contractors, Cannon & Thompson; signed, Jan. 10; filed, Jan. 16; cost $5738.

Lots 10 and 11, block West end map. To build cottage; owner, Miss Lizzie Walker; architect, M. J. Welsh; contractor, I. W. Colburn; signed, Feb. 1; filed, Feb. 2; cost $1550.

Market near 5th. Gas and electric light fixtures; owner, Miss Emma Spreckles; architects, Reid Bros.; contractors, Bush & Mallett Co.; signed, Dec. 21; filed, Jan. 15; cost $3500.

Mason near Geary. Stone and brick work on five-story brick building; owner, Hall Association of the N. S. G. W.; architect, A. C. Lutgens; contractors, Liebert & Hoffmann; signed, Jan. 9; filed, Jas. 10; cost $16843.

Mason near Geary. Terra Cotta Work; owner, N. S. G. W.; architect, A. C. Lutgens; contractors, Steiger Sons; signed, Jan. 15; filed, Jan. 15; cost $1845.

Masonic Ave. near Fell. Two three-story and one two-story frame buildings, ten flats; owner, C. D. Salfield; days work; cost $20,000.

McAllister near Masonic Ave. One-story cottage; owner, Julia O'Kane; contractor, James J. Manseau; signed, Jan. 24; filed, Jan. 24; cost $1500.

McAllister near Masonic Ave. Two one-story frame dwellings; owner, John Otten; architects, Martin & Coffey; contractor, H. Behrens; signed, Jan. 24; filed, Jan. 24; cost $2985.

McAllister near Lyon. Two-story frame; owner, Louis Friedlander; architect, J. F. Kenna; contractor, T. C. Cockrane; signed, Feb. 5; filed, Feb. 6; cost $6050.

Mission near Fourth. Plumbing and gas-fitting on four story brick; owner, A. W. Wilson; architect, J. R. Miller; contractor, R. Rice; signed, Feb. 6; filed, Feb. 9; cost $1990.

Mission near 4th. Elevator work; owner, A. W. Wilson; architect, J. R. Miller; contractors, Cahill & Hall Elevator Co.; signed, Feb. 5; filed, Feb. 9; cost $1505.

Pacific Ave. near Octavia. To build; owner, Elizabeth Dore; architect, Sam'l Newsom; contractor, C. L. Emmons; signed, Jan. 15; filed, Jan. 18; cost $6755.

Pine near Kearny. Mason and carpenter work on two-story brick; owners, J. B. Haggin, Loyd Tevis and Jennie Bull; architects, Keniter & Barth; contractors, Mahoney Bros.; signed, Jan. 11; filed, Jan. 11; cost $36,000.

Point Lobos Ave. Machinery and disenfecting oven; owners, La Societe Francaise de Bemfaissance Mutuelle; architect, R. Chartney; contractors, Clot & Meese; signed, Jan. 18; filed, Jan. 21; cost $2625.

Point Lobos Ave. and Boyce. To build; owner, Annie M. Reilly; architect, T. J. Welsh; contractor, D. Emerson; signed, Jan. 28; filed, Jan. 30; cost $5125.

Point Lobos Ave. and 7th. To build; owner, H. H. Mahan; architects, McDougall & Son; contractor, Wm. W. Farris; cost $8500.

Reed near Washington. To build; owner, R. D. Cunningham; contractor, G. G. Gillespie; signed, Jan. 14; filed, Jan. 15; cost $2810.

Sansome near Broadway. Alterations and additions; owner, Kittle & Co.; architect, Clinton Day; contractors, Riley & Loan; signed, Feb. 6; filed, Feb. 6; cost $1755.

Sanchez near 23d. To build; owner, John H. Eichler & Willhemina H. Eichler; architect, H. D. Mitchell; contractors, Petterson & Person; signed, Feb. 6; filed, Feb. 8; cost $3661.

Seventh near Point Lobos Ave. To build; owner, and builder, Geo. Constance; cost $3000.

Sixteenth and Noe. Remodelling of church; owner, Trinity Methodest Episcopal Church; architect, John Marquis; contractor, J. C. Kelly; signed, Jan. 12; filed, Jan. 26; cost $2430.

Tenth Ave. near Point Lobos. To build; owner, P. Bergren; contractor, J. L. McInnes; cost $2500.

Twelfth Ave. near California. To build; owner, Wm. H. Matthews; architect, C. F. Robertson; contractor, C. Larsen; signed, Jan. 31; filed, Feb. 2; cost $2690.

Twelfth Ave. and Clement. Plumbing; owner, W. H. Mathews; architect, C. F. Robertson; contractor, G. C. Sweeney; signed, Feb. 2; filed, Feb. 6; cost $270.

Van Ness Ave. and Jackson. Hollow tile work; owner, Claus Spreckles; architects, Reid Bros.; contractors, Gladding, McBean & Co.; signed, Dec. 21; filed, Jan. 5; cost $21,670.

Van Ness Ave. near Francisco street. To build; owner, John Mussio; contractor, Miron & Gardner; cost $1500.

Valencia near Liberty. Completing unfinished building; owner, J. B. F. Davis, architect,, J. C. Newsom; contractor, John Furness; signed, Jan. 12; filed, Jan. 12; cost $2058.

Williamson near Point Lobos. To build; owner, John Moriarity; architects, Shea & Shea; contractor, A. L. Jacobson; signed, Dec. 18; filed, Jan. 17; cost $1200.

ALAMEDA

Alameda Additions to Porter School; owner, Board of Education, architects, Laver & Mullany and W. J. Cuthbertson; contractor, F. L. Hansen; cost $9961.

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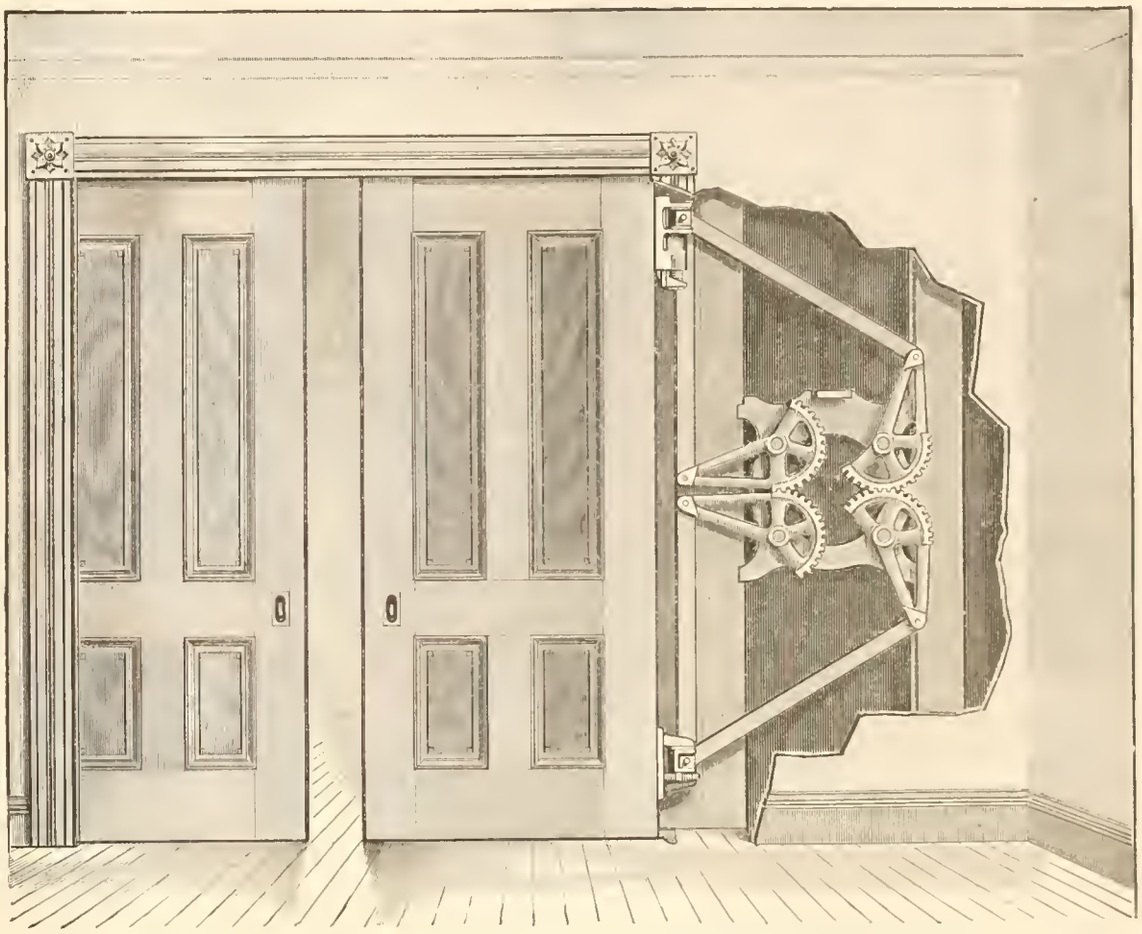

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Jan. 12. Joel F. Hills vs. African M. E. Church; Stockton vs. Clay; $150.

Jan. 12. Additional liens against Luke O'Connor, H. S. Griffin and C. E. Simonton; Tehama near 8th; Donlon & McFarlan, $35; Chas. Fisn, $16; C. W. Withington, $11.

Jan. 12. Towle & Broadwell vs. J. B. F. Davis and B. B. Williams; Dolores near 24; $378.

Feb. 12. C. L. Maxwell & Sons vs. Same; Same; $85.

Feb. 12. Towle & Broadwell vs J. B. F. Davis and B. B. Williams; $339.

Jan. 26. John Downs vs. A. DeMurtini & J. Cavagnaro; Union near Stockton; $64.

Jan. 26. Bush & Mallett vs. Mrs. E. C Oakley alias Chatton; $157.

Feb. 7. Towle & Broadwell vs. C. A. Roesler, Mary E. Roesler and E. McHugh West; Mission near 30th; $368.65.

Feb. 7. S. F. Lumber Co. vs. Same; Same; $553.

Feb. 9. H. Williamson vs. Mrs. E. C. Oakley alias Elvira E. Chatton; Chatton. $244.

Feb. 12. Wm. Crocker vs. W. J. Randall and J. B. Kearny; McAllister near Baker; $352.

Feb. 12. F. Masarie vs. Same; Same; $43.

Feb. 12. Palace Hardware Co. vs. Same; Same; $117.

Feb. 12. Carrie Cooks vs. Same; Same; $70.

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Feb. 12. G. C. Dallamore vs. Same; Same; $94.

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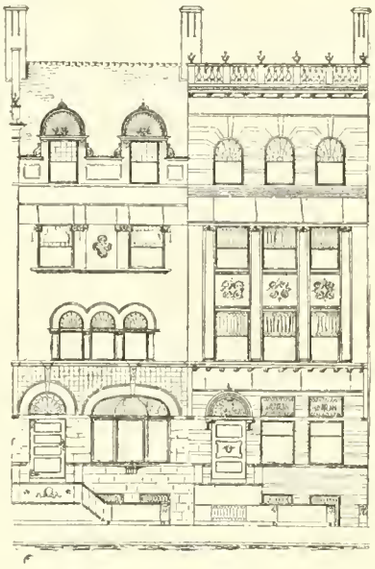

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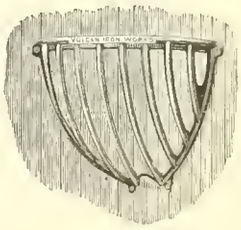

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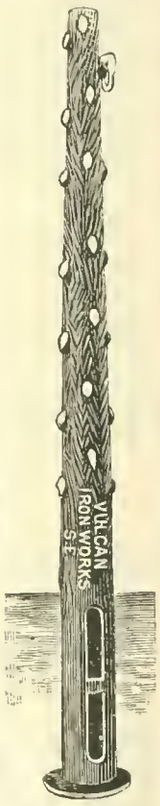

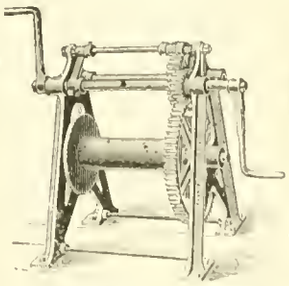

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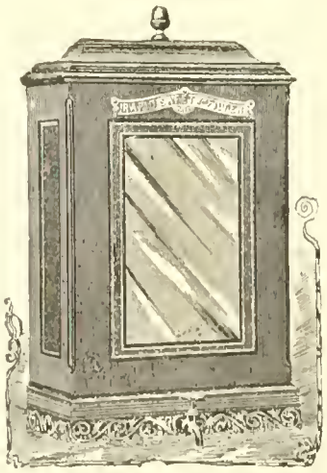

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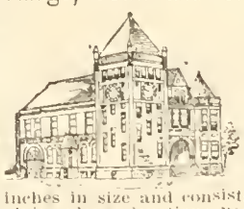

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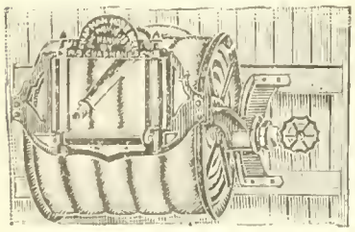

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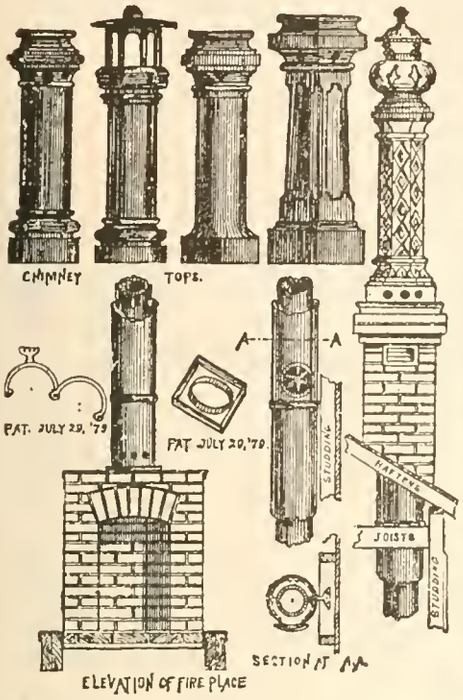

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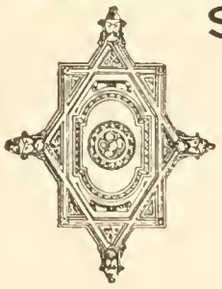

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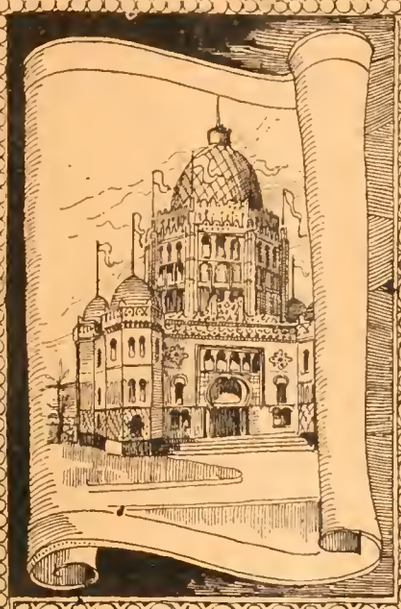

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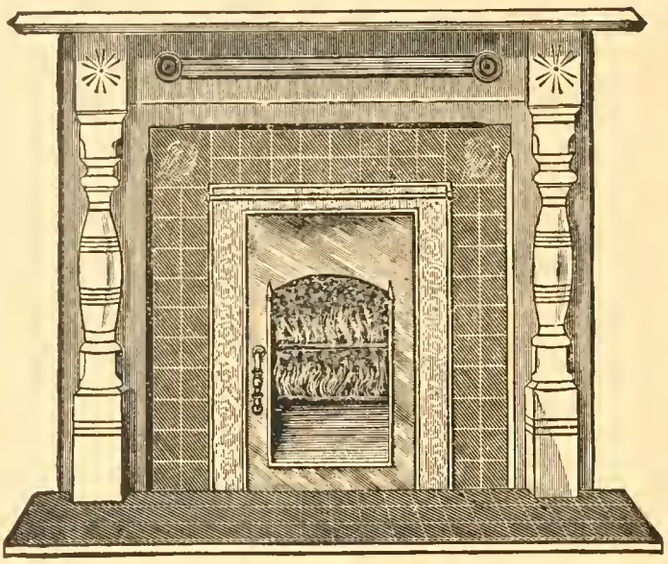

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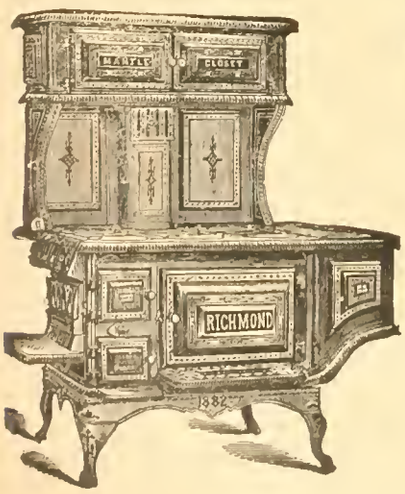

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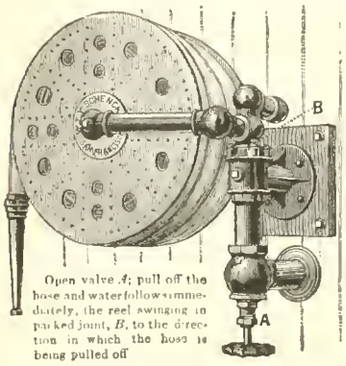

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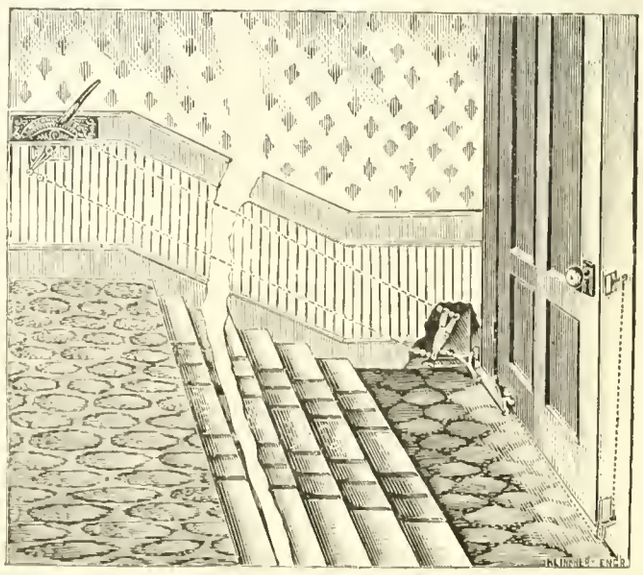

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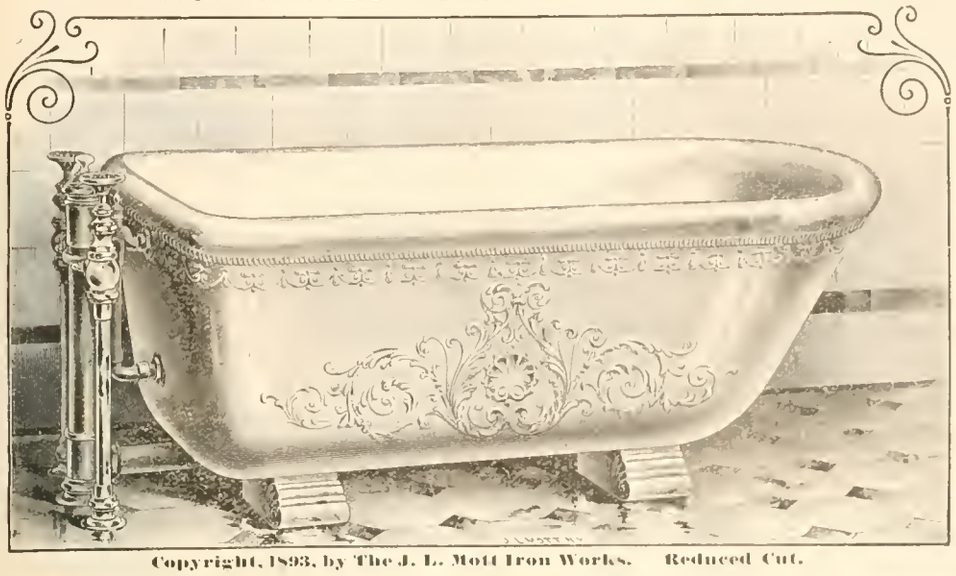

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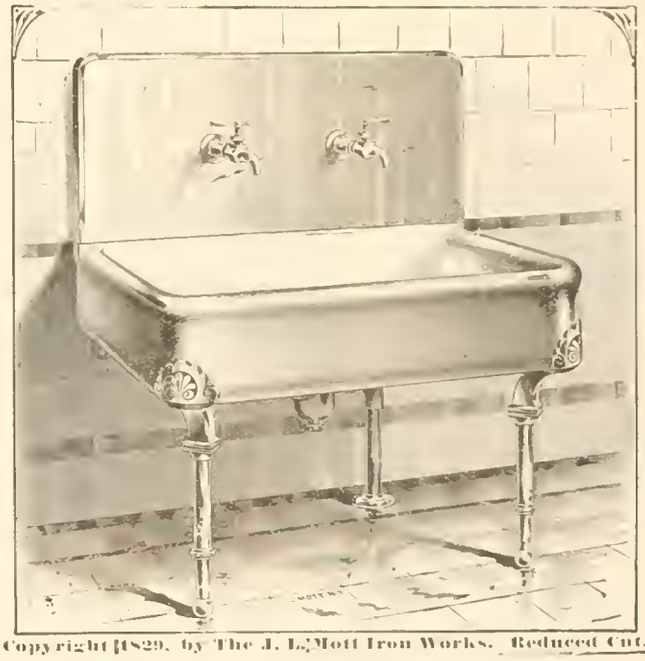

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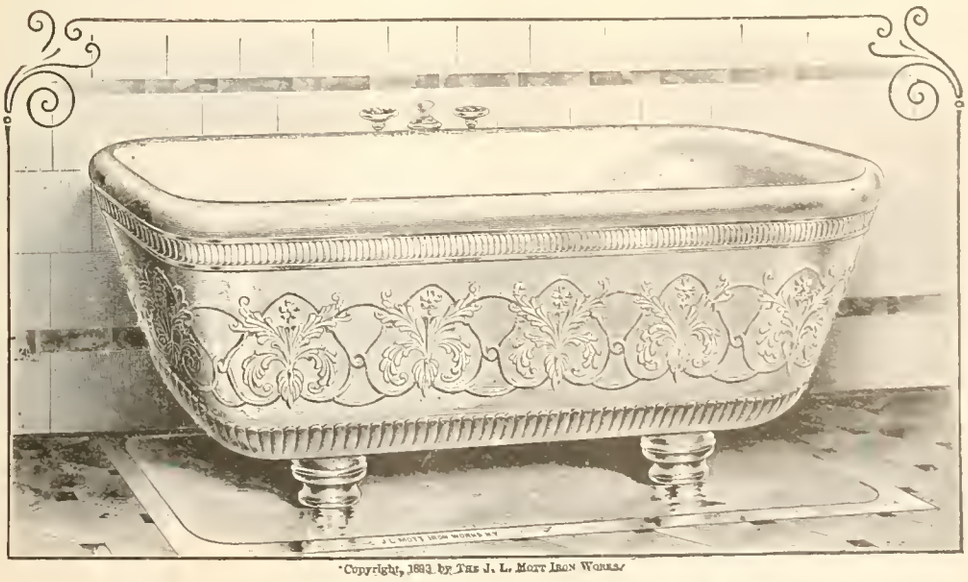

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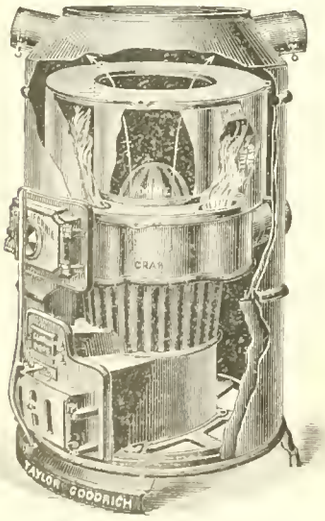

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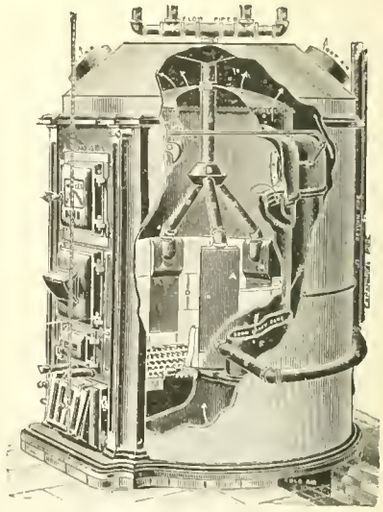

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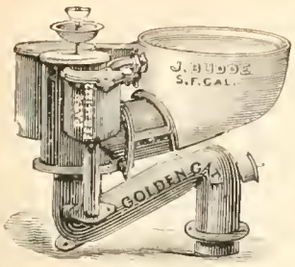

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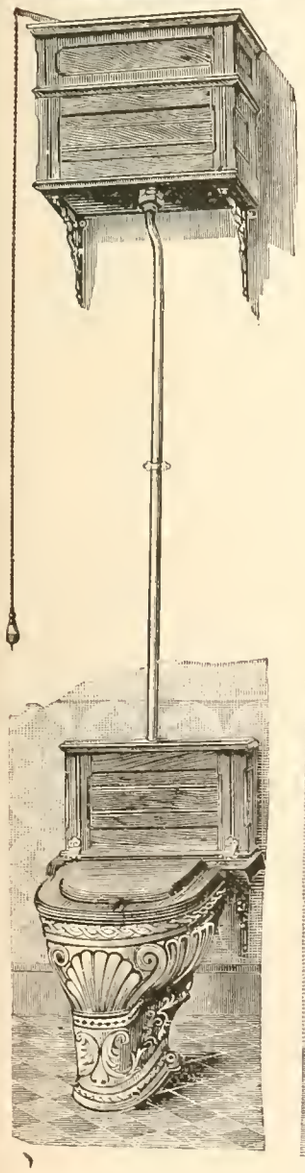
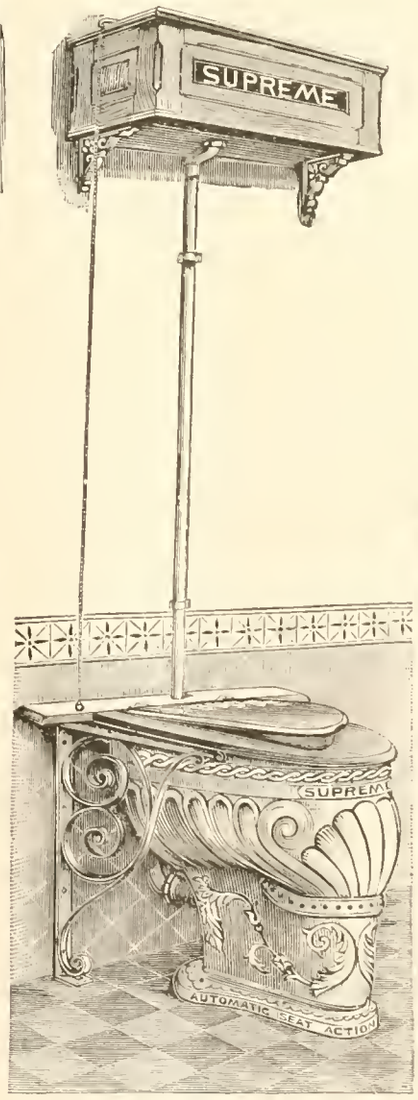
Architects are cordially invited to call at my Sample Room, 575 Mission street and Inspect my Closets in Working Order.



"Supreme Closet" with antique oak seat and tank, nickel-plated flush pipe and brackets from $40 to $45 complete. 200 in Palace Hotel.



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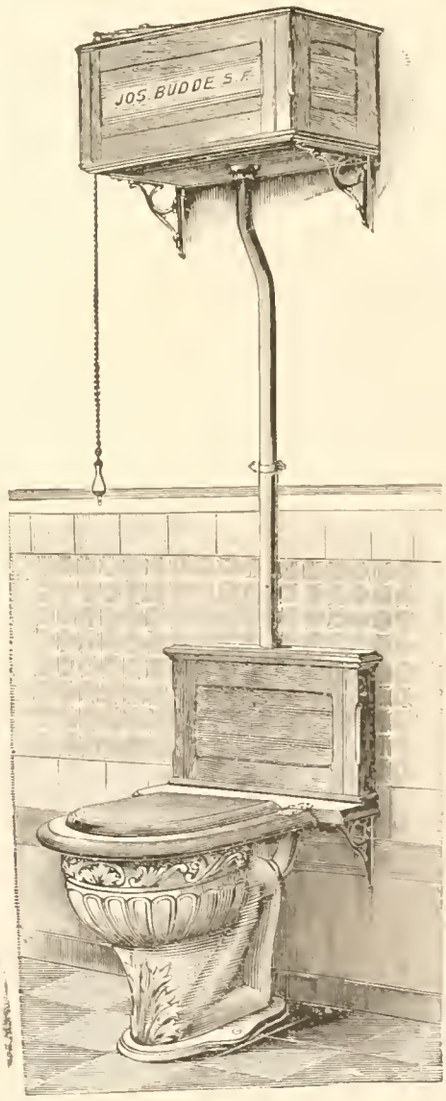

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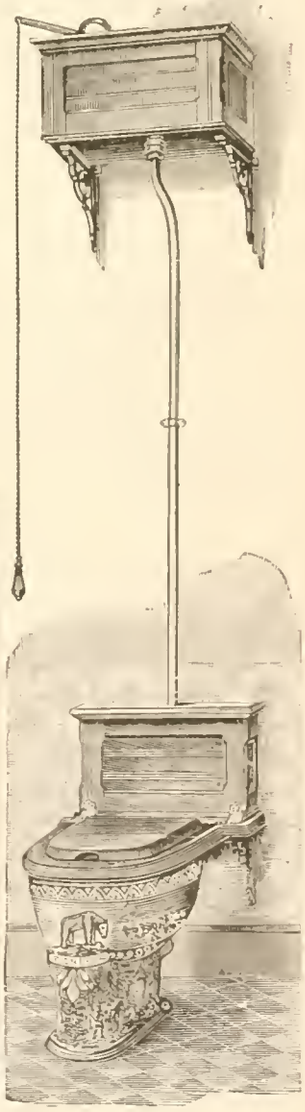

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VOLUME XVI. MARCH 20th, 1895. NUMBER 3.

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SUBSCRIPTION TO THE JOURNAL, - $3.00 PER YEAR IN ADVANCE.

ESTABLISHED 1879. - - - INCORPORATED 1889

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OF the defeat of the bill introduced into the California Legislature to Regulate the Practice of Architecture, there is little to be said except that the public is not yet educated to the importance of the measure, and the opposition that the bill encountered was mainly from parties who feared their personal interest would be jeopardized.

There is certainly no reason why an architect should not be entitled to the same protection that the lawyer and the doctor have at present under our laws.

The recent collapse of a building in New York whereby many people were killed and injured, the coroner giving as a cause the unskillful construction of the building, should be a warning to the public to intrust their building operations to skillful men, who have shown their ability by their works, as well as by passing an examination before a competent board of examiners, as required by this act.

The sober second thought of the public will eventually compel the Law makers to do justice to the architects and place the profession on the same standing, as the lawyers and doctors.

It has been the constant aim of architects of late years to raise the standard of requirements of those anxious to enter the profession. The Royal Institute of British Architects have of late been publishing the requirements of those about to enter the office of the architect, as well as having to undergo three examinations as they progress in their studies before being allowed to membership of the Institute.

In our own country the American Institute of Architects are more exacting every year in the requirements to enter their association; all this shows a very commendable desire upon the part of the leading architects to raise the standard among the profession and secure the proper qualification before admitting members.

This being the case, it would appear that the least the Legislature could do under the circumstances would be to offer some encouragement to those striving to build up our towns and cities in a creditable manner with due reference to the safety of life, security from fire combined with some artistic taste.

We will only add try again and better luck may be the result.

SERIOUS accidents and damages caused by quick running electric cars, calls our attention to the necessity of some different kind of road-bed for them than the present level of the public street.

When the traffic gets any way large in a city it is much put back in its goings and comings by passenger cars and by the same reason passengers by cars are delayed and put in danger by large traffic. It will therefore be absolutely necessary and is now very desirable to clear streets entirely of rapid transit. The cheapest and most desirarable way to do this is to place electric cars running overhead in the centre of the roadway—in narrow streets but one line, in broad streets two lines. The lines to be supported on rows of columns in centre of street—the rails only just high enough to clear the highest vehicle with its load—between these rows of columns put a Bicycle track and a path raised above said track for pedestrians who do not wish to look in shop windows and whose definite object is to make fast time. On the right hand side of this track must pass all vehicles going in that direction, on the left hand those coming in an opposite direction to the former—thus no chance for collisions and no confusion. Municipal regulation to arrange all this. The sidewalks need not be then near so wide as at present, having to accomodate only saunterers—so that vehicular traffic will have more leeway and people crossing the street will only have to look in one direction to prevent themselves from being run over.

Iron stairways at each crossing of streets are to run up to small landings above, where passengers will wait for the cars.

The advantages of this system are manifold:

FIRST—Unobstructed and therefore quick run for the cars.

SECOND—No danger therefrom to life or limb.

THIRD—Unobstructed and therefore quick run for vehicles and no danger of collision except at crossings.

FOURTH—Unobstructed and therefore quicker and less dangerous run for Bicylists.

FIFTH—And most important, danger from cars, vehicles and bicyles to pedestrians at a minimum—getting to the cars from centre walk easier and safer.

SIXTH—Pedestrians who wish to stroll or look at shops not pushed or hustled by those who may be in a hurry and those in a hurry not obliged to make their way through a slow walking crowd.

A LITTLE more than thirty years ago, the war cry of "On to Richmond" resounded through the country, to-day there is a prospect that the cry of "On to Richmond" will be renewed in this city, not as a war cry but in behalf of peace and peaceful homes.

Where is Richmond? we hear some one ask. Richmond is bounded on the east by First Ave. that gives promise of becoming the leading Boulevard of our city, connecting the Presidio on the north with the Golden Gate upon the south.

This section of our city has recently been sewered and drained in the most through manner and stands to-day as the most perfectly drained portion of our city.

Judging by the number of lots that have been sold the last season, building operations will be very active the coming spring and summer.

As people realize the advantage of living in such a healthy location so easy of access to the business portion of our city, this demand for building lots will increase till the fear of over-crowding will be the only objection. The doctors may object to this, as it is such a healthy place there is not much demand for there services.

If we examine the railway facilities we find them ample, the Sacramento cable road, the steam cars from California street to the Cliff House, as well as the Geary street cable cars all pass through Richmond. The Sutro electric road will soon be added to the number, all affording ample facility for reaching the business portion of San Francisco in a short time.

REPORT OF THE COMMITTEE APPOINTED TO COLLECT DATA OF AUTHENTICATED TESTS ON WASHINGTON BUILDING MATERIALS.

BRICK AND CLAY MATERIALS.

Continued from February Number.

WE beg to submit the following tables under the above heading of tests upon brick made at the Watertown Arsenal, and by Mr. Thomson, C. E., City Engineer of Seattle and the Vulcan Iron Works:

MATERIALS CONTRIBUTED AT THE WORLD'S COLUMBIAN EXPOSITION, CHICAGO, ILL.

Compressed surfaces faced with plaster-of-Paris to secure even bearing in the testing machine.

Test No.	Description	Marks	Dimensions Height Inches	Compressed Surface In.	In.
	Everett Electric				
6532	Brick Co. Light Red Brick		2.28	8.08	3.92
6533	" " Dark " "		2.11	7.68	3.00
	Facing Brick				
6534	Denny Clay Company	"We challenge the World for Strength"	2.45	8.98	4.48
6535	" " "	" " "	2.38	8.89	4.45
	Fire Brick				
6536	Denny Clay Company		2.31	8.77	4.33
6537	" " "		2.37	8.77	4.39
	Vitrified Paving Brick				
6538	Denny Clay Company	Denny Clay Company	4.23	8.78	2.70
6539	" " "	" " "	2.61	8.76	4.08
6540	Building Brick	P. S. B. T. and T. C. Company, Seattle,	2.40	8.44	4.23
6541	" "	Wash. P. O. Box 472	2.50	8.52	4.20
6543	" "		2.39	8.18	4.00
	Everett Electric				
6544	Brick Co.	E. E. B. Co.	2.38	8.14	3.96
6545	Pressed Building Brick		2.48	8.67	4.23
	C. A. Shermon,				
6546	Spokane, Wash.		2.40	8.32	4.07

Test No.	Section at Area Sq. Inch	Weight Dry lbs.	oz.	Absorption of Water Total lbs. oz.	By Weight per cent	By Volume per cent	First Crack lbs.	Ultimate Strength Total lbs.
6532	31.67	4	8¼	13	18.	31.1	104,000	126,200
6533	27.65	4	7½	3¾	5.2	11.1	99,000	216,950
6534	40.23	6	13¾	6¼	5.6	11.	250,000	505,800
6535	39.56	6	6¾	6	5.8	11.	309,000	519,700
6536	37.97	5	13½	11¼	12.	22.1	59,900	104,980
6537	37.62	5	15¾	11¾	12.3	22.8	43,000	90,450
6538	23.71	7	12¾	½	0.4	0.86	49,000	288,100
6539	35.74	7	12¼	1	0.8	1.85	155,000	761,000
6540	35.70	5	11¼	11½	12.2	23.1	111,000	170,200
6541	35.78	5	15¼	12½	13.1	24.1	82,800	108,200
6543	32.72	4	11¼	13½	17.1	30.5	81,900	131,050
6544	32.23	4	11¼	13¼	17.6	29.8	81,000	145,800
6545	36.67	5	2¾	19½	23.5	37.	89,900	98,800
6546	33.86	5	3¾	13	15.5	27.6	232,000	281,100

Test No.	Ultimate Strength Per Sq. Inch lbs.	Remarks
6532	3984	
6533	7846	
6534	12573	
6535	13137	
6536	2765	
6537	2405	
6538	12151	Tested on edge.
6539	21293	
6540	4767	
6541	3024	
6543	4005	
6544	4524	Have sunken panel 4-9x1-9x20.
6545	2691	
6546	8302	

Correct:
J. E. Howard

J. W. REILLY,
Major Ordnance Dept. U. S. A.
Commanding.

SEATTLE, WASH., Jan. 9, 1894.

Messrs. Charles H. Bebb & C. W. Saunders, Committee on Tests of Washington Building Materials.

GENTLEMEN: In reply to your request for information touching tests which I have made upon building material manufactured in Western Washington, I would say: My position has been such that my experiments have principally been made upon materials suited for paving and for the lining of sewers, and relate principally to brick.

In October, 1892, a large number of samples were submitted to me for examination in competitive bids for furnishing the lining of our sewer tunnels.

(1) The Denny Clay Company submitted samples of a very dark salt glazed brick, which upon examination and test, gave the following dimensions and behavior:—

Average dimensions, length 8 68-100 inches, width 4 26-100 inches, thickness 2 53-100 inches.

Average weight of brick, dry, 7 lbs. 12 7-8 oz.

Average weight of water absorbed during 72 hours immersion, 2 7-8 oz.

Average percentage of absorption 2 3-10 per cent.

Average specific gravity, 2.27.

One of the brick submitted with the above, showed a percentage of absorption of but 41 100 of one per cent, and had a specific gravity of 2.34, and many of the bricks delivered in our contract were equal in their density, although the average of some 310,000, remained just about the average of the samples. In attempting to crush one of these brick we applied a pressure, of 10,000 lbs. per square inch, and although we destroyed our testing machine, we did not make an impression upon the brick.

(2) The next samples tested were those presented by the Puget Sound Brick Tile and Terra Cotta Company. These brick were of a dark red color, and were made of fairly well pugged blue clay. Under test they showed as follows:—

Dimensions; length 7 68-100 inches, width 3 78-100 inches and thickness 2 26-100 inches.

Weight of brick, dry, 4 lbs. 12 2-3 oz.

Weight of water absorbed during 72 hours immersion, 4 1-6 oz., giving an average percentage of absorption of 5.43 per cent. Their specific gravity was 2.04.

(3) Pontiac Brick and Tile Company submitted samples, which clearly showed that they were poorly ground and poorly burned, and in as much as this company has since that time introduced new machinery, and new methods, the tests of these samples could not be taken as showing the character of present output. They gave as follows:—

Average length: 8 6-100 inches, width 4.00 inch, thickness 2 28-100 inches.

Their average weight was 4 lbs. 13 oz.

The average weight of water absorbed during 72 hours immersion was 11 1-2 oz., and the percentage of absorption 14 94-100 per cent and the specific gravity 1.82.

(4) The Seattle Brick and Tile Company also submitted a very large number of samples. These were of a very dark and dull red color, but were made of a well ground clay, and burned with coal in a down draft kiln.

Their average dimensions were; length 7 92-100 inches, width 3 78-100 inches, and thickness 2 39-100 inches.

Their average weight while dry was 5 lbs. 3 oz.

The average amount of water absorbed 1 1.3 oz., and the average percentage of absorption 5 25-100 per cent and specific gravity of 2 11-100.

Of these latter brick I have used about two million, and of these, the specific gravity has averaged 2 22-100, which is 11.100 better than that of the samples submitted.

Two firms have submitted paving brick, viz: The Denny Clay Co. and the Seattle Brick and Tile Co. The brick presented by the Denny Clay Co. had a specific gravity ranging between 2.21 and 2.35. These brick absorbed 2.29-100 per cent and 1 52-100 per cent of their weight in water respectively. I placed them in a foundry rattler, with about a ton of small sized scrap iron, and revolving the rattler at the rate of twenty-six revolutions per minute, gave them 16,600 revolutions. The softer brick lost 29 per cent of its weight, and the harder one, but 17 per cent, and both still retained, in fair degree, their original shape.

The Seattle Brick and Tile Company's pavers had specific gravities ranging between 2 17-100 and 2 32-100. These were also tested for absorption and showed 4 2-100 per cent and 2 37-100 per cent respectively, and when placed in rattler and given 16,600 revolutions, in connection with above one ton of scrap iron, they showed less of weight of 34 6-10 per cent and 15 6-10 per cent respectively.

From the above experiments I am able to say that we have in the vicinity of Seattle, clays, which under fair and reasonable treatment, will yield as perfect a brick as any I have been able to find from any place in the world.

Very truly yours,

R. H. THOMPSON.

THE VULCAN IRON WORKS CO.

SEATTLE, WASH., Sept. 21, 1894.

To Whom it May Concern:—

We have made the following tests of brick at the requests of the Seattle Brick and Tile Co., viz:—

	Commenced to Crack. Lbs. per sq. in.	Crushed. Lbs. per sq. in.
End Cut Brick No. 1	2500	3150
" " " " 2	2500	
Side " " " 1	Did not crush at 4646 lbs.	
" " " " 2	2250	2580
" " " " 3	2500	3460

Machine got stuck at 2800 lbs. per sq. inch and did not crush it, in testing End Cut Brick No. 2. We herewith testify to correctness of the above tests.

Yours very truly,

THE VULCAN IRON WORKS CO.,
Per J. Hume,
Manager.

Your Committee begs to point out that the lists just read comprise tests made upon the materials manufactured by a very limited number of factories compared to the entire number in the State. Investigation demonstrates that there is not a State in the Union richer in all varieties of clay beds from the highest grades of pure Kaolin and fire clays, to the commonest low grade brick earth. The above tests though made upon material manufactured in the infant development of the clay industry in this State, compare favorably with tests made upon similar materials manufactured by any of the Eastern States, and competition among home manufacturers assures architects, owners and builders of yet higher grades in all lines of clay building materials. We are satisfied that the day has passed when the railroad companies will receive fifty per cent of the cost of high class clay materials, as the State of Washington has now within its limits more than one factory producing pressed brick, terra cotta and fire-proofing equal in quality to anything produced in the East.

We recommend the appointment of a new Committee to further investigate into the clay working industries of the State of Washington, that they prepare and submit a report upon the subject at the next annual convention embracing a record of tests made by acknowledged experts, and in order

that these tests may be really serviceable and valuable to the architects and manufacturers, we advise that a paper of suggestions for the conduct of tests upon various clay materials be prepared by them and a copy furnished the different manufacturers of clay products. Such suggestions coming from a body of men forming indirectly the chief consumers of their products will, we believe, be received in good part.

LUMBER.

After the careful paper prepared by Mr. C. B. Talbot and read at our last regular meeting, it would seem there is not much left to be said under the above heading. If confirmation was necessary his paper confirms the fact that the State of Washington has almost unlimited stores of the finest lumber in the world for constructional purposes. Your Committee herewith submits the list of tests given by Mr. Talbot and made under his supervision, and has added thereto a table of ultimate fiber strains developed by each stick.

EXPERIMENTS ON ACTUAL BREAKING LOADS IN POUNDS ON YELLOW FIR AND OTHER TIMBERS—CAREFULLY SIZED—BY C. B. TALBOT AND OTHERS.

Size	Length	Clear Span		Deflection	Age	Breaking Load	Lbs. per sq. in.
2x4 in.	4 ft.	3ft.-9in.	Y. Fir	½ in.	6 yrs.		3063 = 6891.75
2x4 "	4 "	3 " 9 "	"	½ "	3 mos.	half dry fine gr	3062 = 6889.5
2x4 "	4 "	3 " 9 "	"	⅝ "	3 "	hard gr. fine	4320 = 9720.
2x4 "	4 "	3 " 9 "	"	½ "	3 "	clear "	3685 = 8178.75
2x4 "	4 "	3 " 9 "	"	½ "	1-½ "	" "	3358 = 7555.5
2x4 "	4 "	3 " 9 "	Coner d'Alene Pine	1-½ "	mo. Cr.	fine gr	2274 = 5116.5
2x4 "	4 "	3 " 9 "	Eastern White Pine	1	yr. dry		1610 = 3622.5
2x4 "	4 "	3 " 9 "	" "	Oak	1	" "	2428 = 5463.

EXPERIMENTS BY MR. HART AND OTHERS.

6x14 "	16 "	15 " 9 "	"	3½ "	1 day cut		29635 = 7257.55
8x16 "	20 "	19 " 0 "	"	2½ "	1 " "		15000 = 7910.15
9x16 "	20 "	19 " 0 "	"	2¾ "	6 yrs. old	in bridge	26488 = 4138.75
8x16 "	16 "	15 " 9 "	"	2¾ "	"	" "	41370 = 5817.65
8x16 "	16 "	15 " 9 "	"	2½ "	1 day cut	fine close gr	56764 = 7982.45
8x16 "	20 "	19 " 0 "	"	2½ "	6 yrs. old		34635 = 6088.18
9¼x16 in.	20 "	19 " 0 "	"	2½ "	1 day cut		40408 = 6143.1
8¼x16 "	20 "	19 " 0 "	"	2⅞ "	6 yrs. old		37041 = 5953.01
8x14 "	20 "	19 " 0 "	"	⅞ "	fresh cut cross grained		17317

This last specimen was selected as the worst possible sort and was so cross grained as to be entirely cut off one in three-and-a-half feet.

In working out these strains your Committee has taken the full length of the stick intead of clear span, the clear span would, of course, have given slightly higher res

Herewith we also submit the lists of tests kindly fur d by the *Puget Sound Lumberman*.

RAILWAY TESTS OF DOUGLASS FIR.

Following is the result of tests of Washington fir m at mills at St. Paul and Tacoma Lumber Company, Ta Wash., on March 12th and 13th, 1890, by A. J. Hart, Master Mechanic of the Chicago, Wilwaukee and St. Paul Railway Company, Milwaukee, under the direction of John T. Crocker, general purchasing agent, and B. W. Smith, timber agent of said road. At the tests made, Messrs. D. D. Clark, F. M. Haynes and C. B. Talbot, representing the Northern Pacific Railroad Company, were present and assisted in said tests:

Size of Stick	Length of Span	Moduli of Rupture	Fibre Strain
6¼x15¼ in.	18 ft.	25,284.57	5,391.1
6¼x11¼ "	15 " 9 in.	29,635.3	7,144.2
6¼x14¼ "	11 "	39,111.	6,585.
6¼x11¼ "	15 "	26,791	6,151.7 dry stick
8¼x16¼ "	19 "	15,277	7,560.9
9¼x16¼ "	19 "	25,094.	3,724.93 6 yrs old
8¼x16¼ "	16 "	39,672 75	5,591.63 3 " "
8¼x16¼ "	15 " 9"	54,722.76	7,478.41
8¼x16¼ "	19 "	32,101.3	5,263.5 dry stick
9¼x16¼ "	19 "	38,568.27	5,571.09
8¼x14¼ "	19 "	31,963 3	5,338.1
8¼x14¼ "	19 "	16,250.13	3,544.35 cull

The greatest deflection in any of these sticks was 3½ inches. The least deflection in any of these sticks was 1½ inches. In all these tests the centre load was applied.

TESTS OF FIR. RESULTS OF THE SECOND SERIES.

Further tests of the strength of fire lumber have been made by S. Kedzie Smith, city engineer of Ballard, and the *Lumberman* herewith gives the results. The tests were for transverse strength. The lumber, which was furnished by the Stimsen Mill Co., was forty days air seasoned and a little above the grade of good merchantable lumber. It was no better than would enter into good building construction. The bearing of the load on the beam was eighteen inches long and curved to a radius of six feet.

No. of Test Piece	7.	8.	9.
Size of Piece	21 5-16x7⅞	31 -16x8	3x8
Span between end supports	8 feet	8 feet	8 feet
Different loads placed upon each beam with the deflection in inches for each load.	1,000 4/32	1,000 1/32	1,000 2/32
	2,001 6/32	2,000 5/32	2,000 5/32
	4,000 14/32	4,000 10/32	4,000 9/32
	6,000 22/32	6,000 18/32	6,000 20/32
	6,800 1 12/32	8,000 26/32	8,000 28/32
		10,000 1 23/32	10,000 1 21/32
		10,200 2 4/32	10,880 3 11/32
Breaking load	6,800 lbs.	10,200 lbs.	10,880 lbs.
Stress in extreme fiber	5,310 "	7,500 "	8,160 "

10	11	12	13	14
3 1-16x12-⅛	3x12	4x11-⅞	4x12-⅛	4x11¾
12 ft.	12 ft.	12 ft.	12 ft.	12 ft.
1,000 3/32		1,000 2/32	1,000 2/32	1,000
2,000 6/32	2,000 3/32	2,000 6/32	2,000 4/32	2,000
4,000 11/32	4,000 10/32	4,000 12/32	4,000 9/32	4,000
6,000 18/32	6,000 16/32	6,000 16/32	6,000 15/32	6,000
8,000 25/32	8,000 23/32	8,000 24/32	8,000 20/32	8,000
10,000 1 2/32	10,000 1 in	10,000 27/32	10,000 26/32	10,000
		12,000 1 16		

Brick Co.,
Pressed Building Brick
C. A. Sherman,
Spokane, Wash.

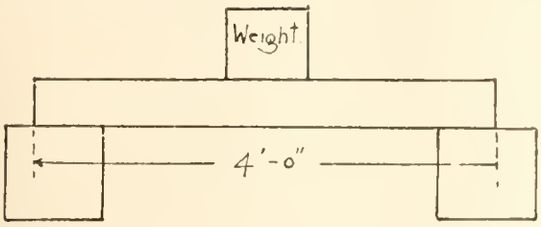
Test No.	Section at Area Sq. Inch	Weight Dry lbs.	oz.	Absorption of Water Total lbs.	oz.	By Weight per cent	Vo per
6532	31.67	4	8¼	13		18.	
6533	27.65	4	7½	3¾		5.2	
6534	40.23	6	13¾	6¾		5.6	1
6535	39.56	6	6¾	6		5.8	
536	37.97	5	13				1
6537	37.62			1,000	6		1
6538	25.7				32		
6539				2,000	8		
					32		
				4,000	16		5
					32		
				6,000	23		6
					32		
				8,000	1 in.		8
				10,000	1 10		9
					32		
				10,200	1 18		
					32		

Breaking load	10,200 lb.	9,400 lb.
Stress in extreme fibre	4,605 "	4,255 "

Test No. 7 was a coarse-grained red fir.
Test No. 8 a close-grained yellow fir, near outside of log.
Test No. 9 a close-grained yellow fir similar to No. 8; lower edge close to sap.
Test No. 10 a medium fine-grained red fir; near outside of log.
Test No. 11 a coarse-grained red fir.
Test No. 12 a coarse-grained red fir.
Test No. 13 a coarse-grained red fir.
Test No. 14 a coarse-grained red fir.
Test No. 15 a coarse-grained red fir.
Test No. 16 a very coarse-grained red fir.

REPORT OF H. H. WARNER.

As to the strenth of our fir, I, with others, witnessed a test made by Engineer C. B. Talbot of the woods used in car and bridge building, viz: Fir, eastern pine and oak. Pieces were selected of good quality, 2x4 inches, 4 feet long, and tested as illustrated:



The following was the breaking pressure:

Fir	4,320 lbs.
Eastern oak,	2,428 "
Eastern pine,	1,610 "

It will be noted that the tables of ultimate fiber strains run the same average in the lists. It is perhaps not in the province of this Committee to give the fiber strains of woods grown outside of the State. It may be sufficient to point out that yellow Washington fir heads the list published in the *Puget Sound Lumberman* of all woods used for constructional purposes in regard to strength.

There are some points that your Committee wish to draw the attention of the Chapter to. The wide variation in the strength of the same material shown in the lists just read is one of them. The ultimate fiber strains vary from about 4,000 lbs. to nearly 10,000 lbs. per sq. in.; under these conditions does the Chapter consider that a sufficient number of tests have been made from which to adopt a reliable standard. It is a noteworthy fact, that as far as your Committee has been able to discover, there is not one hand-book of Engineering or Architecture that gives any information whatever in regard to Washington fir. We think this is an important fact which deserves consideration by the Chapter. Another point we wish to make is that we are in-

Weight of w cutting of trees and the logging busi 10
4 1-6 oz., giving he most part in the spring and s ption of
5.43 per cent. perhaps hardly necessary to go b

(3) Pontiac Br t on the subject of Architecture amples,
which clearly sho the year 25 B. C. strongly condem nd and
poorly burned, an er to be used in important constr s since
work shoul t from growing trees while the sa ds, the
meating every branch. Timber should be cut betw ing the
months of November and March. We are satisfie
sticks sawed from winter cut trees and properly season
will, when tested, show the best results; and as the use of such timber is only in conformity with the best engineering practice, we respectfully suggest the appointment of a Committee to draw up a resolution to that effect to be indorsed by the Chapter now in session.

Your Committee is satisfied beyond a doubt, that the tests so far made that have come to our knowledge, while showing high average results, do not do justice to Washington fir. Trantwine, Hatfield, Rankin, Laslett, and others give the moduli of rupture of *spruce* beams as from 8100 lbs. per sq. in. to 11,100 lbs. per sq. in., and of common white pine as from 10,000 to 13,000 lbs. per sq. in., no doubt derived from tests made upon small specimens, the results being necessarily larger than if derived from tests of full size timbers, as the smaller pieces do not contain as many imperfections as always occur in larger ones. Professor Lanza of the Massachusetts Institute of Technology, however, made some tests on full sized sticks of pine and spruce and the average of sixty-eight experiments gave only 5046 lbs. per sq. in. fiber strains, thus justifying the doubt as to the utility of the fiber strains given by the above mentioned authorities, even for ordinary work. There can be no doubt in the mind of any person acquainted with the three mentioned woods, that yellow fir should develop at least twice the strength of either of the others, which so far has not been the case. Architects and Engineers are still in the dark as to what average fiber strain per sq. in. they may safely adopt for our firs, and consequently, what factor of safety they may use.

We beg also to point out that it has long been considered that it is better engineering to determine as the safe load of a timber beam or joist, the load that will not deflect it more than a certain fraction of its span, in other words to take the bending moment in preference to the modulus of rupture. We are of opinion that the known data is insufficient from which to make a reliable table of deflection under given loads.

Finally we would suggest that further tests be made under the direction of some competent Committee appointed by the Chapter and from these and former tests, some standard be recommended for adoption, and that the information, when obtained, be forwarded to such well known authorities as Trantwine, Kaswell, Hatfield, Kidder, etc., to be published at their discretion in the annual editions of their hand-works.

Your Committee has not had the time to carry their investigations into the other building materials of the State, and while we realize how incomplete this report is, we have done the best with the time at our disposal.

Respectfully submitted,

CHARLES W. SAUNDERS } Committee.
CHARLES H. BEBB }

THE EXAMINATION FOR ADMISSION TO CANDIDATURE: AN HISTORICAL NOTE.

Continued from February Number.

E first Examination under By-Law XIV. was held in March 1882, and two others were held the same year, in and November, under the charge of a Board appointed e Council, the regulation being that the number on Board should not be less than five Fellows nor more twelve. As a matter of fact, the first Board of Exam- in Architecture which ever met at the Institute were inted in November 1880, and consisted of the President (the late John Whichcord), the three Vice Presidents (Professor Hayter Lewis, the late Sir Horace Jones, and Mr. Ewan Christian), the Hon. Secretary (Mr. Macvicar Anderson), with Messrs. James Brooks, Arthur Cates, E. A. Gruning, E. H. Martineau, E. R. Robson, Alfred Waterhouse and T. H. Watson. The newly-appointed Board conducted the last of the Voluntary Architectural Examinations; and, at the meeting of the 20th May 1881, Street, who was then President, occupied the Chair. His immediate successor in the presidential office—the late Sir Horace Jones—presided over the Board at the first Examination under By-Law XIV. held in March 1882, vacating it at the Oral Examination in favour of Mr. Arthur Cates, who has been periodically re-appointed Chairman of the Board, and has conducted almost every Oral Examination since the beginning of that year.

Five years after the introduction of Examinations under

By-Law XIV.—a By-Law made under the provisions of the Charter granted to the Institute by William IV.—a second Charter repealing some of the provisions of the earlier one was obtained from Her Majesty the Queen in Council. The grant was made by a Deed executed 28th March 1887, and the third section of this Charter contains the words "From the date of this our Charter every person desiring to be admitted an Associate shall be required to pass or have passed such Examination or Examinations as may be directed by the Royal Institute." Power was given at the same time, under Section 21, to grant Diplomas and Certificates in connection with Examinations, and to make By-Laws which should define, regulate, and prescribe the relations of the Institute to other Sociaties having kindred aims and purposes.

A few months after the grant of the new Charter an important Conference of Architects was held in London. At one of the meetings held 4th May 1887, it was recommended: (1) That the Institute should undertake the guidance and direction of professional education; (2) that a scheme of a complete system of examination should be prepared; (3) that such system should comprise a Preliminary, an Intermediate, and a Final or Qualifying Examination; and (4) that this system of Progressive Examination should be arranged with the co-operation of local Societies in the United Kindom. At another meeting, held the next day, it was further recommended that the Institute should be the centre of any federation of the members of the profession within the British Empire, and that such object might be best attained by connecting the various local Societies which existed, or which might thereafter be formed, with the Institute. Other cognate matters were discussed by the Conference, but the two above signalised were the most important. A great deal of minute and careful attention was given to both subjects in the course of the two subsequent sessions, and the scheme of Progressive Examination was approved by a Special General Meeting of the Institute, held 8th April 1889. At the same meeting the Architectural Societies of Bristol, Leicester, Liverpool, Manchester, Nottingham and Sheffield, with the Royal Institute of the Architects of Ireland, the Glasgow Institute, and the Northern Architectural Association—nine in all—were admitted to alliance with the Institute under the provisions of By-Laws than recently approved by the Privy Council. Since that time six other bodies in England, Scotland and Wales, with another in Australia, have been similarly admitted to alliance; with what results may be seen in the *Kalendar* last issued to members. The same issue of this work gives the fullest description yet published of the three Progressive Examinations. At the present hour the Probationers number 631, the Students 130; and the number of those eligible for candidature as Associate exceeds 100, with a reserve of 113 applicants relegated from previous occasions, and having the right of admission to the "Final" to be held next March and subsequent Qualifying Examinations.

The above applies only to the class of Associate. All the machinery in force, all the efforts to aid the education of architects and of architectural students, all that is sketched in the foregoing review, concerns admission to candidature as Associate. But the new Charter of 1887, under Section 3, lays down that from the 28th March 1892 the Institute shall have power to declare that every person desiring to be admitted a Fellow shall also be required to have passed an Examination. Although nearly three years have elapsed, the only "Examination" for admission to candidature as Fellow is contained in a "Regulation" for carrying into effect By-Law 3: that after the 1st November 1893 every such person shall submit to the Council, as evidence of his abilities as a practising architect, drawings, or photographs, of his executed works, accompanied with a signed declaration that the said works have been designed by himself. Since that Regulation was passed thirteen persons, of whom ten were already members in the class of Associate, have been elected Fellows; while, during the same period, 76 Associates have been added to the Register. The number of Associates is now 873, and there are more than 100 candidates, 64 of whom passed the recent Examination, eligible for election to that class; while the Fellows, who in October 1892 numbered 617, and in January 1893, 621, now number 611. Before the next Annual General Meeting it may be confidently anticipated that the number of Associates will far exceed 900, while that of the Fellows will show little increase. One of the main results of the Charter of 1887 is an apparent shifting of the preponderance of power, in the ordinary affairs of the corporate body, from the Fellows to the Associates of the Institute.—*Journal of the Royal Institute of British Architects.*

SAN JOAQUIN RAILROAD.

IN the December number of this journal we had occasion to speak of the lack of enterprise shown by the Real Estate men of our city, and remarked if they had any pluck the San Joaquin Railroad would be well under way by this time. Since that time we are happy to say they have in a measure redeemed themselves and at the present time there is every prospect of a competing road being soon ununder way.

If this should meet the eye of any who have not yet subscribed to this deserving enterprise we hope they may be induced forward as they may gain the public weal by adding their names to the subscription list without waiting to be called upon.

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

COMPETITIVE Design, Alameda City Hall, W. J. Cuthbertson, Architect.

A COUNTRY Hotel, W. D. Van Siclen, Architect, San Jose, Cal.

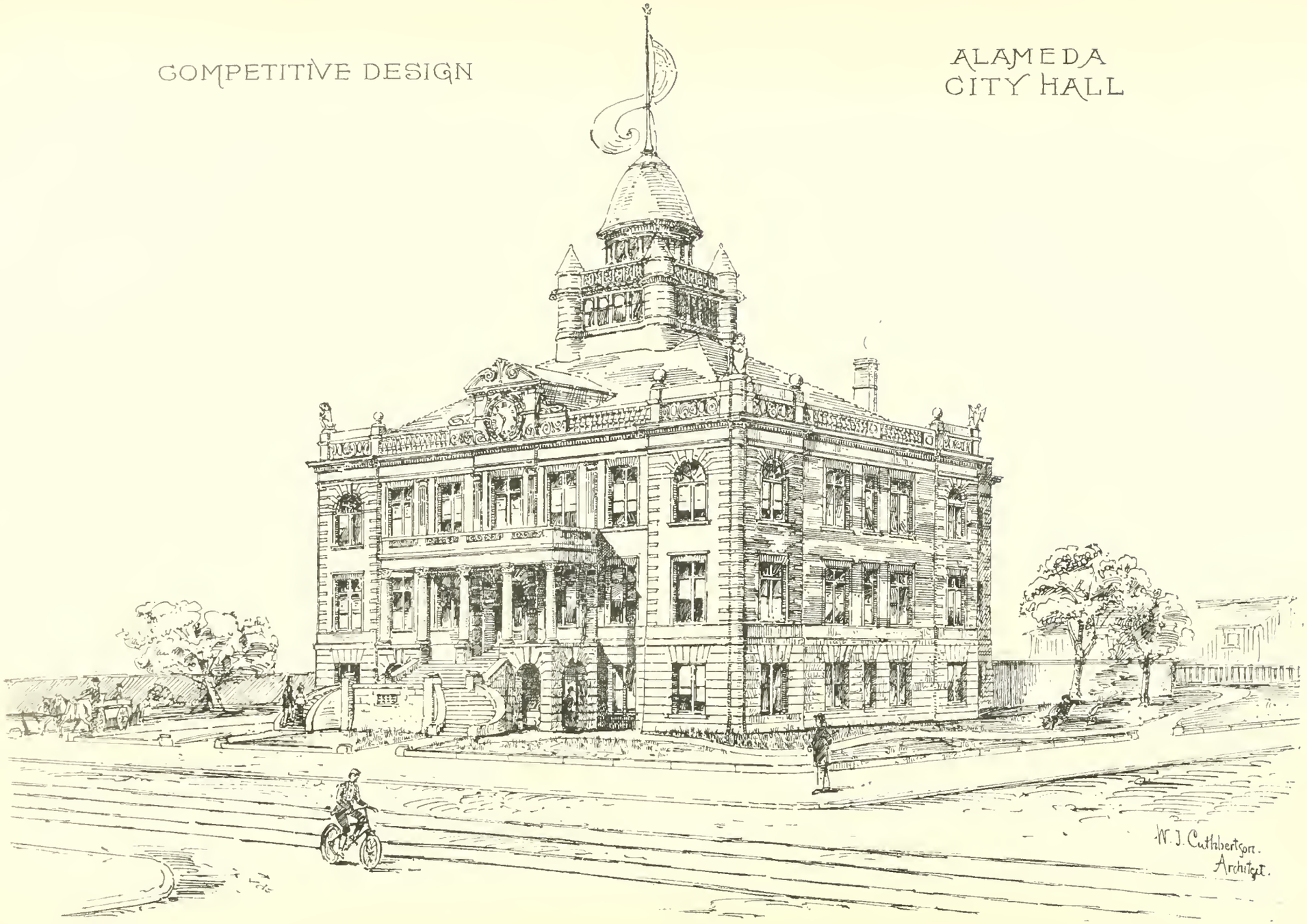
PERSPECTIVE of California Safe Deposit Building, Henry A. Schulze, Architect.

BUILDING for A. W. Wilson & Co., Mission street between Third and Fourth Sts., J. R. Miller, Architect.

ALAMEDA
LIBRARY
READING ROOM

COMPETITIVE DESIGN

ALAMEDA CITY HALL



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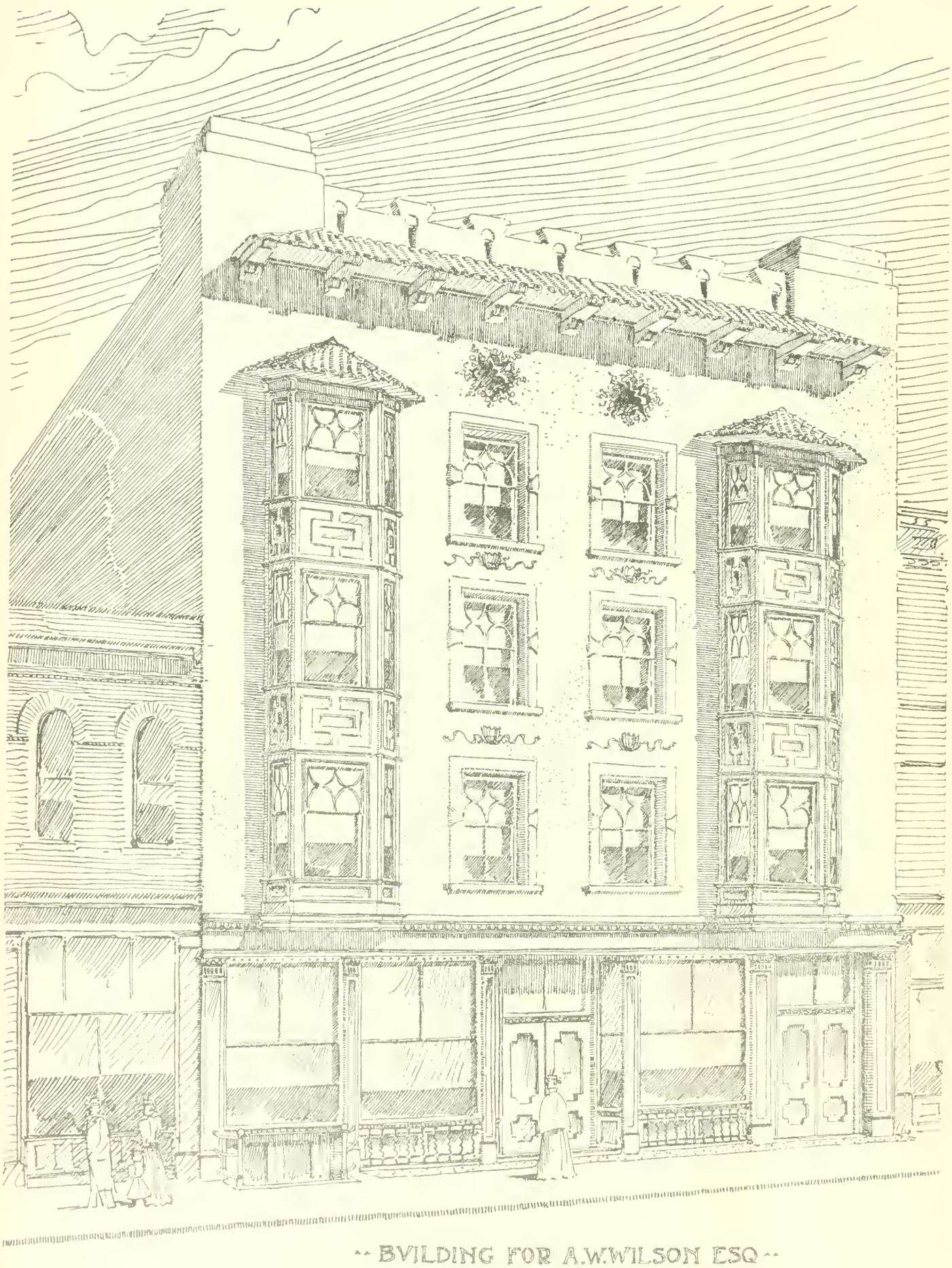
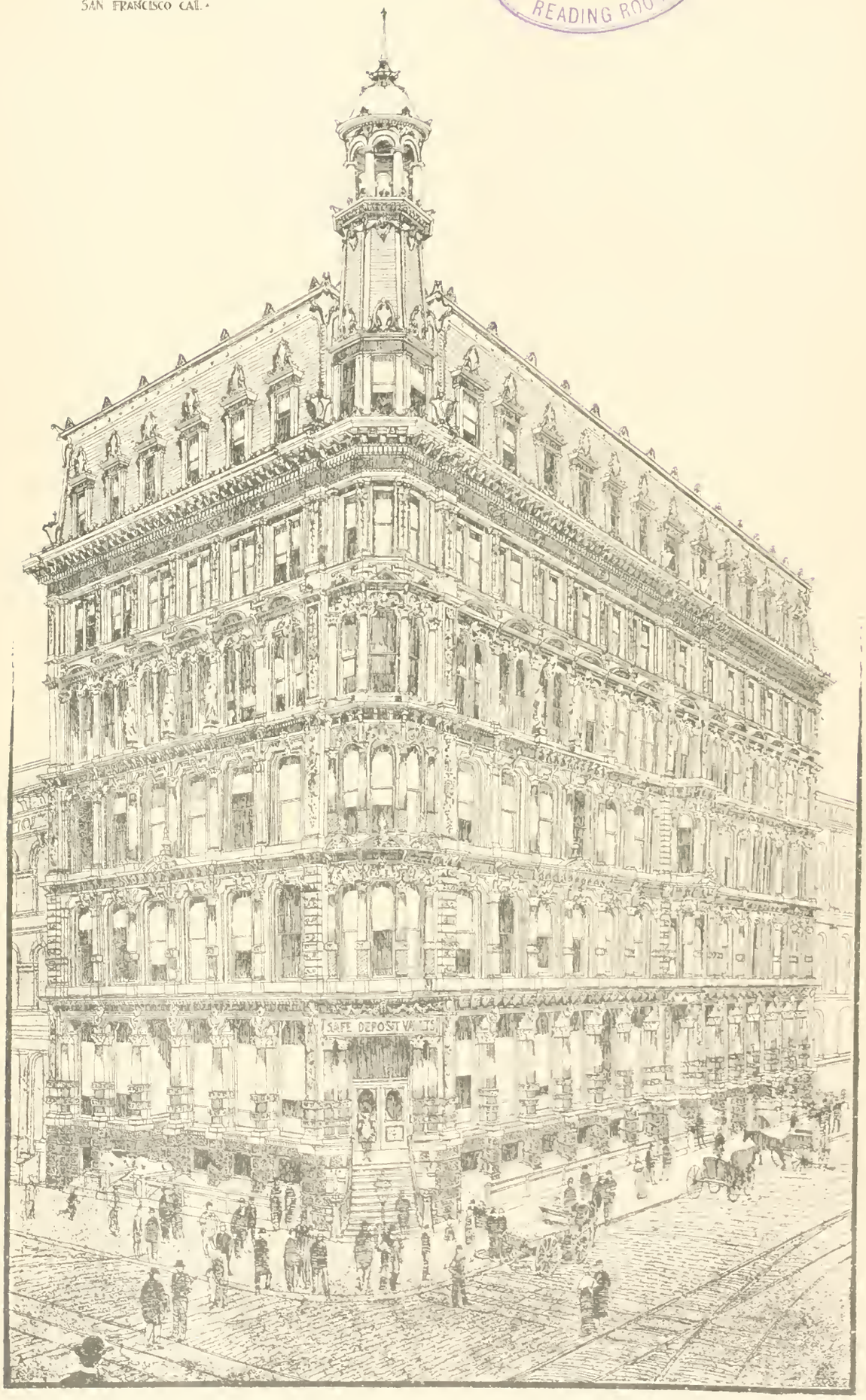
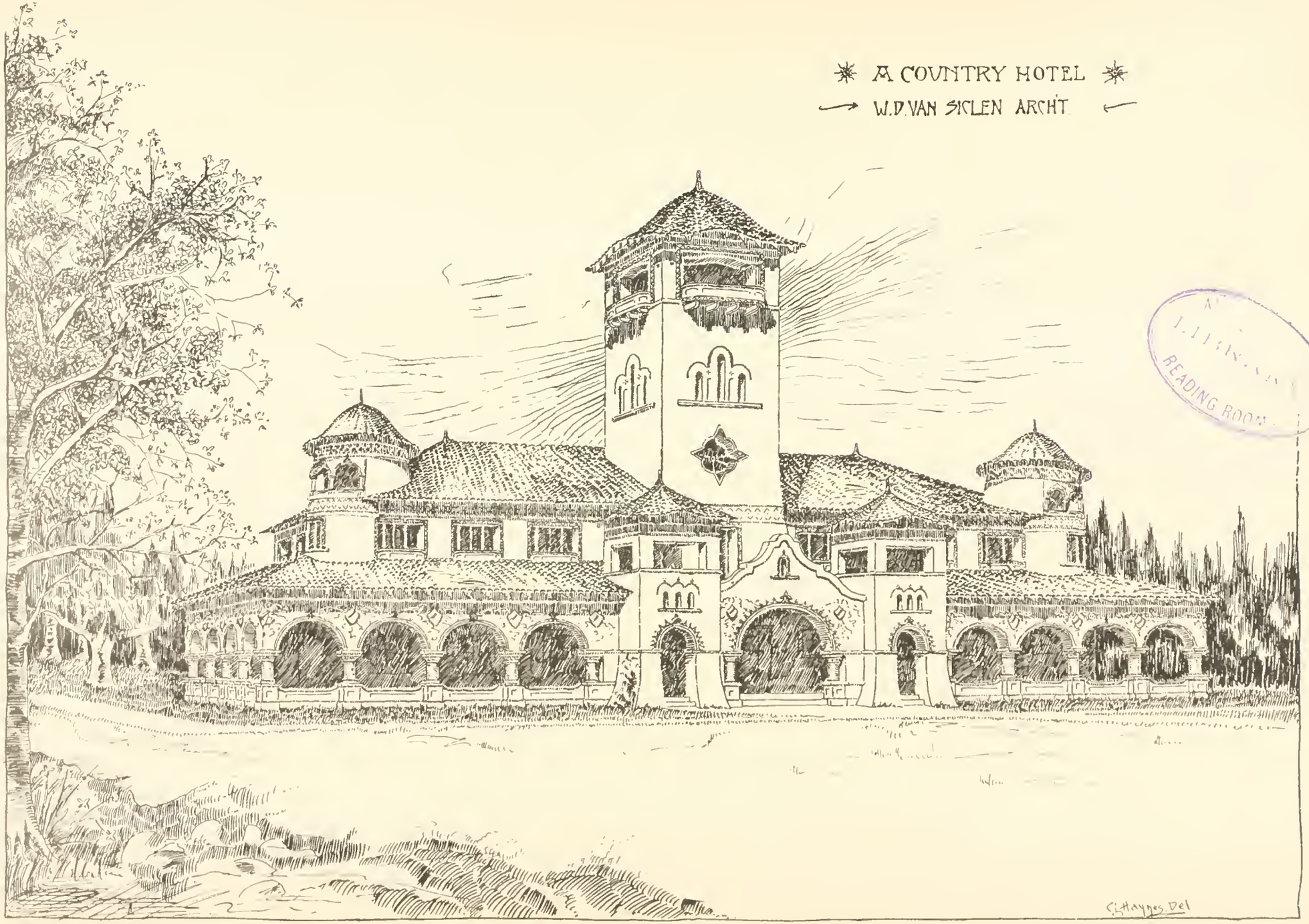


-- BVILDING FOR A.W.WILSON ESQ --
-- MISSION ST. BET. 3RD & 4TH STS. --
-- J.R.MILLER ARCH'T CROCKER BLDG. SF. --

PERSPECTIVE OF CAL. SAFE DEPOSIT & TRUST Co's BUILDING. HENRY A SCHULZE ARCHITECT. FLOOD BUILDING RM 94. SAN FRANCISCO CAL.

LIBRARY READING ROOM





READING ROOM

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. Geo. W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 111 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

PRACTICAL SUGGESTIONS RESPECTING THE VENTILATION OF BUILDINGS.

A REPORT TO THE STATE BOARD OF HEALTH. BY JOHN H. KELLOGG, M. D.

GENTLEMEN:—In obedience to your request, I herewith present in brief form a few suggestions and fundamental principles which it is believed may be found of service in arranging the ventilating system of public and private buildings. The sole effort has been to embody, in as brief and lucid a form as possible, the information which the writer has gathered during some years of study of the subject, and such facts as he has gleaned from his own experience in planning and superintending buildings of some size for hospitals and other purposes. The only recommendation offered for the plans and principles suggested is that they have borne the test of practical experiment in a satisfactory manner, which cannot be said respecting all the schemes for the warming and ventilation of buildings which have been offered in works on sanitary subjects published within the last score of years. In justice to himself, the writer ought to say that he has not undertaken to make this paper exhaustive, or anything more than what its title indicates; neither has he undertaken to enter the field which properly belongs to the architect, but rather to present simply such suggestions and theories as he has himself found of practical value, and which are susceptible of general application, omitting altogether the minor details, which, however necessary to the adaptation of a general plan or principles to any particular case, are likely to be of little service except in the special conditions to which they are specially adapted. Seeking, then, to avoid as much as possible, redundancy of language and circumlocution in methods of presentation, let us begin at once the discussion of the things most essential in a correct scheme for the proper ventilation and heating of a building.

First of all, it may be stated that the ventilation and heating of a building must be considered together, for a successful working of each will depend upon the conditions of the other. It needs no argument to impress the fact that the amount of heat to be furnished in any given instance must depend very largely upon the amount of fresh air to be supplied per hour or minute. If the air of a room is to be changed four times per hour, certainly a proportionately arger quantity of fuel must be consumed than if the air is to be changed but once an hour.

The air supply of a room or building is generally determined by its size rather than by the number of persons by which it is to be occupied. This is certainly not a scientific method. A large room, occupied by but one or two persons, might possibly admit through cracks about windows and doors, and through its porous walls a sufficient air supply; while a small room, crowded with people, would require a very large provision for the supply of fresh air. The first thing, then, to be considered in the study of the ventilation of a room or building is the number of persons who are to occupy the space under consideration.

According to the most eminent sanitary authorities of England, each healthy adult person requires not less than three thousand cubic feet of air per hour. This statement is based upon careful experiments, which showed that if the normal quantity of carbon di oxide contained in the atmosphere, which is two parts to every five-thousand parts of air, is increased to three parts in five thousand of air, the limit of tolerable impurity is reached; that is, if the amount of CO_2 is increased by respiration to a larger proportion than that stated, namely, three parts in five thousand, the air thus contaminated becomes productive of disease. It must not be supposed that the poisonous properties of such air are due to the chemical compound CO_2. Air may contain a much larger proportion of CO_2 provided this compound is derived from purely chemical sources, without injury being apparent. But when the CO_2 is furnished by the respiration of animals, there is association with it a subtle poison, which has been shown by the eminent physiologist, Prof. Brown Sequard, to be one of the most powerful poisons known, exceedingly minute quantities being sufficient to produce death.

A little computation based upon the experiments referred to will show that Dr. Parke's figures are certainly not extravagant. With each breath, each human being exhales into the air one cubic inch of carbon di-oxide, and a definite amount of organic poison associated with it. As air naturally contains two cubic inches of carbon di-oxide in every five thousand cubic inches of air, and as an additional cubic inch of CO_2, or three cubic inches in five thousand cubic inches of air is the limit of safety, it is evident that each breath renders unfit for further use, five thousand cubic inches, or approximately, three cubic feet of air. The average person breathes eighteen times per minute; consequently each person spoils or renders unfit for further use, 3x18, or 54 cubic feet of air per minute; 54x60 gives us, as the amount of air which each person contaminates per hour, 3240 cubic feet, a slight excess over the amount named by Prof. Parkes. Some other authorities place the line of dangerous contamination at a somewhat higher point, and consequently they require a smaller amount of air. Avoiding either extreme, we may place the amount of air required per hour for each healthy person, at about 2400 cubic feet. It must be understood, however, that this rule applies to healthy persons only, and it is not applicable to hospitals or buildings occupied by infirm or sick persons. For such institutions, and for manufacturing establishments in which the air may be contaminated by chemical or other processes, at leased double the amount named, or 5000 cubic feet of air per hour must be supplied. In any given case then, to ascertain the amount of air required per hour, we have only to multiply 2400 or 5000 as the case may be, by the number of persons to be supplied with air. The number of persons taken should be the maximum rather than the minimum number which the room or building is calculated to accommodate, for the evident reason that the capacity of a ventilat-

ing shaft, duct or opening, may be easily diminished, but cannot be so readily increased.

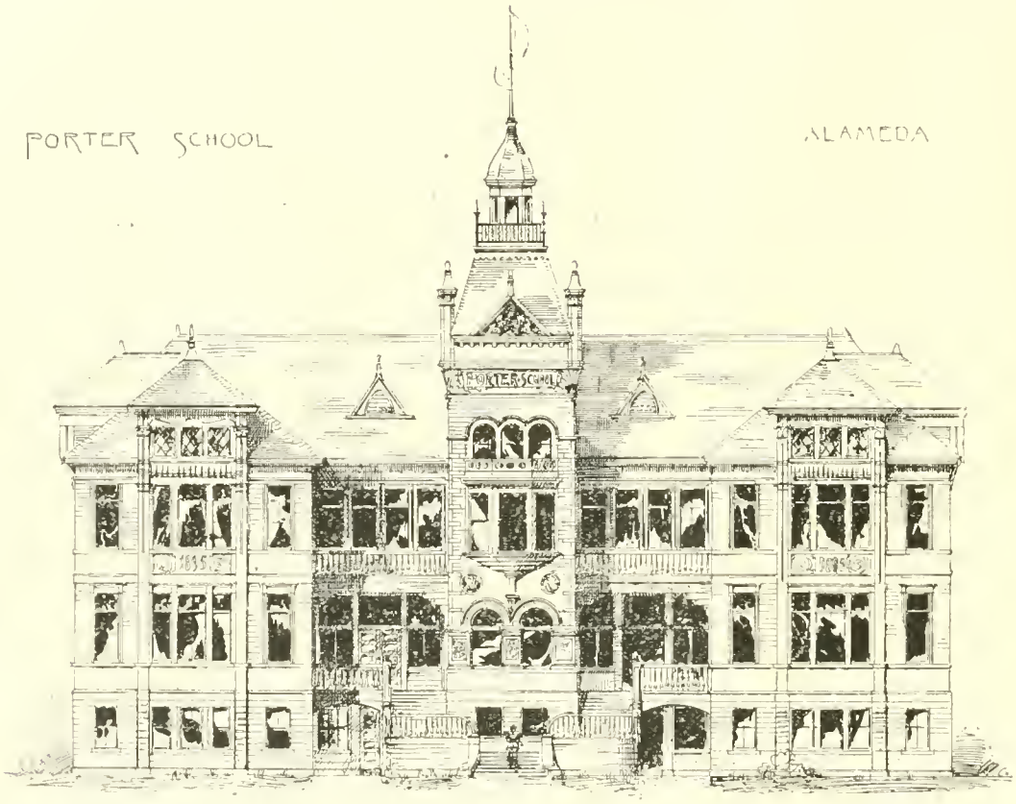
Having determined the amount of air required in any given case, the following important practical points remain to be determined:—

1. The circulation of the fresh air.
2. The area of fresh-air inlets.
3. The area of foul-air outlets.
4. The location of foul air outlets.
5. The construction and location of foul-air ducts.
6. The location, sectional area, and height of ventilating shafts.
7. The question of artificially assisting the draft by means of a pressure or suction fan, or by means of heat in the ventilating shaft.

We will consider each of these several questions in the order named.

height, from which it may escape readily. If the escape of air from the room is assisted by means of an efficient ventilating shaft, the velocity of the incoming air may be safely computed as ten feet per second. If the fresh air enters the room at a temperature so high as 120° F. to 150° F., the velocity of the air-current will be increased to 12 or 15 feet per second. Better practical results are obtained by large volumes of moderately heated air, traveling at a moderate speed, than from super-heated air traveling at a high velocity.

Calculating the velocity of the incoming air at ten feet per second, it is only necessary to divide the total amount of air required per second by ten, and the result will represent the area of free opening required. An allowance of at least forty per cent must be made when the openings are covered by register-plates. For example: Suppose the amount of air needed is 240,000 cubic feet per hour, sufficient to sup-



ADDITION TO PORTER SCHOOL, LAVER & MULLANY AND W. J. CUTHBERTSON, ARCHITECTS.

1. A room cannot be properly ventilated without an efficient arrangement for the circulation of air. For this there must be for each space to be ventilated at least two openings: one for the admission of fresh air, the other for the removal of impure air. Nothing could be more absurd than the frequently witnessed attempt to ventilate a room by supplying it with a ventilating shaft connected with proper ducts and foul-air openings, but without any provision for a supply of fresh air. Such an arrangement is eminently well calculated to produce dangerous drafts through the opening of windows, and the impression that any attempt at efficient ventilation is liable to result in failure. It is also essential for the proper distribution of the air admitted to a room that the air shall be heated before it enters room or building, or at the moment of entering.

2. To determine the required area of fresh-air inlets, the amount of air required and the velocity at which the air is to travel must be known. Air heated to a temperature of 40° F. above that of the external air will travel at the rate of about five feet a second when entering a room of ordinary

ply 100 persons with the minimum quantity of air. This requires $66\frac{2}{3}$ cubic feet of air per second. Sixty-six and two-thirds divided by 10 is $6.6\frac{2}{3}$. Adding 40 per cent for obstruction of register-plate, give us 9.3 square feet as the combined areas of the register-covered openings for admitting fresh air.

3. The number and location of the fresh-air inlets is not a matter of so great importance as is commonly supdosed. If the fresh air enters the room at a temperature 20 to 40 degrees higher than that of the air of the room, it will go at once to the ceiling, no matter where or how admitted, and will thence gradually diffuse itself through the room, its course being chiefly determined by the location of the windows and of the foul-air exit openings. I think it preferable that the fresh-air inlet should be in the wall, near the floor, rather than in the floor, as it is by this means better protected against the accumulation of dust and dirt.

In the case of large buildings containing several floors and many rooms or apartments to be supplied with air, it is best not to undertake to carry a separate fresh-air duct to

each room, but to equalize the air pressure within the building by leading large ducts to the common hall or corridor of each floor, supplying each room of each floor through open transoms or register plates placed near the ceiling. This arrangement secures a constant supply of pure air in the halls or corridors from which each room can draw, and establishes a constant current in the direction of individual users of the air, the foul air being directly removed from each separate room by its own duct. This plan secures the greatest possible safety from the dissemination of contagion or the dispersal of any element capable of producing dangerous contamination of the air.

4. Experience has shown that in order to prevent unpleasant draft, the velocity of the air at outlet openings should not be greater than five feet per second. The necessary area of outlet openings is readily obtained then, by simply dividing the total amount of air to be supplied per second by five. For example, suppose a room to be ventilated is calculated to accommodate thirty persons, each to be supplied with 2400 cubic feet of air per hour. The aggregate amount of air to be supplied will be 30x2400 or 72,000 cubic feet. Dividing this amount by 3600, the number of seconds in an hour, we have 20 cubic feet as the amount required for each second. Dividing this by 5, the velocity allowable, we have 4, which represents the necessary area for the foul-air outlets in square feet.

It must of course be understood that the figures thus obtained represent actual opening, and not an opening partially obstructed by a grate or register. As before stated, forty per cent must be allowed for when the opening is covered by an ordinary register.

As regards the proportion of the area of the foul-air exits to the area of fresh-air inlets, it may be said that outlets should be at least double the area of the inlets, since a velocity of ten or fifteen feet per second may be allowed without injury or inconvenience at the inlet, although such a velocity would not be tolerable at outlet openings.

TO BE CONTINUED.

EXPOSITION OF INDUSTRIES AND FINE ARTS OF MEXICO, 1896.

THE Federal Government has obligated itself to admit *free of duty* all materials and machinery for any buildings to be erected on the Exposition grounds, or the entire buildings imported for erection there, and, furthermore, it is expected that all building material used in construction of exhibition buildings and buildings entire for exhibition will be carried by the Railroad at one-half the regular tariff on same.

To this very important fact we desire to call the attention of Builders and Dealers and Manufacturers of Lumber, Machinery, Hardware, Glassware, Metal Roofing and Building Material.

It can readily be seen that there is open to our merchants a large and profitable field for their manufactures, taking in consideration the fact that at present there is in Mexico a great dearth of building material, the prices of which, under the tariff, were high. The exposition grounds will embrace an area of about 600 acres, and there will be ample space provided for the construction of all varieties of buildings of a desirable nature aside from the official buildings of the National and Foreign departments and buildings used by concessionaires, and at the close of the Exposition the material used in the construction of these buildings will find ready and quick sale to Railroads, Haciendas, Merchants, etc. It is projected that a large hotel on the American plan shall be erected on the grounds for the accomodation of such visitors as prefer the comforts of American civilization, and it is understood that this hotel will remain permanent, it being located in the suburbs, in close proximity to the city.

The Exposition will undoubtedly create a large demand for portable buildings, such as cabins, kiosks, stations, ticket offices, etc., which could be easily transported and readily sold at the close of the Exposition.

As contracts will be made for the erection of all of the main buildings of the Exposition as well as the buildings

for concessionaires and others connected with the Exposition, a great and legitimate profit could be realized by the formation of a stock company which could handle all of these contracts, and parties desiring to subscribe to the company could in lieu of cash furnish merchandise and material.

The advantage derived from the liberal privileges granted by the Mexican Government to our merchants on the occasion of this Exposition are such as should be eagerly sought for by those who have the interests of the advancement of American commerce at heart.

In the interest of the exhibitors of the United States a company has been formed at San Francisco, Cal., under the style of the American-Mexican Exposition Company, A. K. Coney, Consul General at San Francisco, President, of whom any further information regarding the Exposition can be obtained.

BOOKS AND PERIODICALS.

LIPPINCOTT'S MONLHLY MAGAZINE for March, contains one of Captain Charles King's delightful stories called "A Tame Surrender" for the complete novel. Among other interesting articles "A Glimpse of Cuba" will be found timely from the fact at the present time Cuba is undergoing one of her usual revolutions, or perhaps it would be more proper to write attempted revolutions.

INDUSTRY, a monthly magazine comes to hand for March containing a number of articles not only of general interest, but particularly so for the resident of this coast. "Constructive Engineering on the Pacific Coast," as well as "Ship Building" will be read with pride as showing the advance that is being make in the science of Engineering and Mechanical Arts on this Coast.

THE GOULD'S MANUFACTURING CO.—This company have just issued a handsome illustrated catalogue and price list of pumps and hydraulic machinery for every service. The headquarters of this establishment is at Seneca Falls, New York, with warerooms 16 Murray street, New York City. Having been founded in 1848, it is fair to suppose that their pumps and other machinery must be of great value to account for the large increase of their works, Woodin & Little, 312 314 Market street, San Francisco, is one of their principal branch agencies.

A number of tables giving capacity of round tanks and cisterns, dimensions, weight, etc., of wrought iron welded pipe horse power shafting will transmit; weights and measures, estimate of values of foreign coins, and many others will add greatly to the value of this catalogue as a book of reference.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

SUFFICIENCY OF STATEMENT OF MECHANIC'S LIEN.—A mechanic's lien stating that the labor was done and material furnished in improving the separate real estate of a married woman is sufficient to charge the property.

Reece v. Haymaker, Supreme Court Penn., 50 At Rep. 401.

CONTRACT WITH OWNER NECESSARY IN LIEN FOR MATERIALS.—A person claiming a right to a lien for labor or material furnished in the construction of a building must show that it was performed or furnished at the instance of the owner or his agent.

Sellwood Lumber & Mfg. Co. v. Monell, Supreme Court Oregon, 38 Pac. Rep. 66.

STATUTE FOR MECHANIC'S LIENS LIBERALLY CONSTRUED.—The statute by which a mechanic's lien is created was designed to protect material men, contractors and laborers; and, although in derogation of the common law, its provisions should be liberally construed, to the end that the intention of the legislature may be realized, and substantial justice done to all affected by its provisions.

Hill v. Alliance Bldg. Co., Supreme Court S. D. 60 N. W. 752.

LIABILITY FOR INJURIES TO ADJOINING OWNER.—One who erects a chimney on his land is liable for injuries to an adjoining owner by its fall, when it is not the result of inevitable accident, or wrongful acts of third persons.

Cork v. Blossom, Sup. Jud. Court of Mass., 38 N. E. Rep. 495.

DEFECT IN DESCRIPTION OF PROPERTY CURED BY EVIDENCE.—Where, in a building contract, on which a mechanic's lien is claimed the only description of the property was embodied in the statement that it was "to be erected on Avenue E, just north of U. S. Post Office building, in the city of San Antonio, Tex.," the defect, if any, in such description, is latent, and may be aided by extraneous evidence.

The order of the introduction of evidence is within the discretion of the court.

Myers v. Maverick, Ct. Civ. App. Tex., 27 S. W. Rep. 1083.

WHEN TAKING NOTE DOES NOT WAIVE MECHANICS' LIEN.—In the absence of an agreement or anything indicating an intention to the contrary, a mechanic or material man does not waive his right to file and enforce a lien merely by accepting for the amount of his claim the promissory note of the owner, at his request, and for the sole purpose of suspending his right to foreclose such lien for sixty days, at which time such note, according to its terms, matures.

Neither will the mere assignment of such note operate as a waiver or extinguish the lien, nor prevent the assignee from obtaining a decree of foreclosure, provided he has the note, and offers to surrender it at the trial for cancellation.

Hill v. Alliance Bldg. Co., Supreme Court S. D., Co. N. W. Rep. 752.

RIGHTS OF ASSIGNEE OF CONTRACT.—Where a vendor has made advances to the purchaser to enable him to erect a building on the land under an agreement that he should be secured by a lien, specific performance in favor of the assignee of the purchaser will be decreed, subject to the vendor's judgment for the money so advanced.

The assignee of an oral contract for the purchase of land, which has been partly performed, has the same right to specific performance as the assignor.

Dodge v. Miller, Supreme Court, 5th Dpt., 30 N. Y. S. 726.

EFFECT OF FAILURE TO AFFIX NOTARY'S SEAL TO CLAIM FOR LIEN.—The omission of a notary to affix his seal to the jurat in a notice of claim for a lien cannot be cured, at a trial of an action to foreclose the lien, by the introduction of parol evidence that the claim was in fact sworn to; and where the seal is affixed, and the name of the notary is omitted, parol evidence to the effect that the claim was in fact sworn to is equally incompetent; and the omission in each case renders both claims for a lien insufficient, when filed, to constitute constructive notice of the existence of such liens.

Such failures do not defeat the lien, but operates to postpone it to purchasers or incumbrances in good faith, without notice, whose rights accrued after the time within which the verified statement should have been filed. They are not available to one with actual notice of the existence of such lien, takes a quit-claim deed to the property, subject to all valid liens, under circumstances that fail as a matter of law to make him a purchaser in good faith.

Hill v. Alliance Bldg. Co., Supreme Court S. D., 60 N. W. 752.

BUSINESS MOSAICS.

When a man decides upon improving his shop, factory or farm, by the addition of power, he naturally looks for something entirely up to date. He investigates, considers, and finally decides to buy an Ajax Coal Oil Gas Engine as meeting his requirements more fully, and being safer, than any other power obtainable. Palmer & Rey, San Francisco, Cal., the manufacturers of this engine, have earned the gratitude of the public by placing within its reach a reliable, economical power, that defies the restrictions of insurance companies. It is the latest and best.

"**It's** the horse Oi don't bet on that always wins at the races," said Mr. Dolan. "An' somehow Oi never can remember to put me money on him an' let th' others alone."—*Washington Starr.*

The attention of architects and those contemplating building is called to the advertisement of "The J. L. Mott Iron Works" on page v of this issue. The high prices that had to be paid heretofore for the class of goods there shown has deterred many architects from specifying and owners from using same, but now this firm has made arrangements, by which these goods can be furnished at practically the same prices as first-class enameled iron goods. The merits of the solid porcelain goods are so well known that no comment is necessary. Their San Francisco agent M. S. James at room 35 Flood Building will give all information that may be wanted on this subject.

"**Haven't** you got this book in a chicken salad binding?" asked the Cheerful Idiot. "What do you mean?" asked the astonished bookseller. "Half calf."—*Indianapolis Journal.*

Merchant & Co. give a number of good reasons why their brands of tin should be used: First because you obtain the finest quality of Martin-Siemen's open hearth steel; second, because you get a uniform standard of coating all over the plate; third, because the coating is put on by a Palm Oil process and not by acid flux generally used on account of its cheapness. Therefore be careful to specify the world's best "Merchant's Old Method," "Merchant's Roofing," and "Alaska." The strength of a chain depends on its weakest link, the life and value of a roofing plate depends on its thinnest bit of coating. The value of Merchant's roofing tin is in the process and uniformity of coating, and the entire absence of acid flux.

"**Can** I write my name under the received payment on this bill?" asked the bill collector who likes to put things as delicately as possible. "No, thank you," replied Mr. Brokely, "I'm no autograph fiend."—*Washington Starr.*

The New and Improved Chapman Fire Hose Reel is the latest improvement and may be considered a very efficient and reliable apparatus, the manufacturer makes the claim that it is the best in the world. See their advertisement on page xii of this journal. R. S. Chapment, late Fire Suveyor for Board of Underwriters, 14 and 16 Fremont street, will give you further information, and a guarantee that what he sells is as represented.

George Goodman may be considered a benefactor of that portion of mankind that live in San Francisco, a man that makes the rough ways smooth can certainly be considered a benefactor; Artifical stone in all its branches with sidewalks and garden walk a specialty is what Mr. Goodman finds to fully occupy his time. 307 Montgomery street, Nevada Block, San Francisco.

Mrs. Quizby—"Why didn't you sell your house after pou advertised it?" Mrs Brown—"When we saw the description that the real estate agent gave of it, we thought it would be a paradise lost if we did."—*Philadelphia Inquirer.*

Phoenix Pure Paint is guaranteed absolutely pure and satisfactory on the building or we will replace it with any material the architect may select "This is what the manufacturers say of this article and when W. P. Fuller & Co. say a thing they mean what they say.

While you are discussing the paint question with this firm, it is a good time to inform yourself about "Duresco" their new wall finish or washable water color, if you are not already posted on that question.

Thar is the place whar the Major fell through the ice." "How do you know?" "Easy enough. Just look at that cork floatin' yander."—*Atlanta Constitution.*

Samson Spot Cord is a cord that speaks for itself, as you can see at a glance that no other cord is substituted; warranted free from wasts and imperfections. Send for samples to Samson Cordage Works, Boston, Mass., and you will be satisfied to use no other.

"**When** does this cough trouble your wife most?" Husband—"When she has her ear to the keyhole trying to hear what the new boarders are saying.—*Chicago Inter-Ocean.*

If you are in want of electric fixtures, and do not know where to find them, go to Thomas Day & Co., 222 Sutter street, where anything in the way of gas and electric fixtures are sure to be of the best quality in the market.

Caller—"We are very rich and wish to marry our daughter to a count, a marquis, or a duke. Clerk (with dignity)—You are in the wrong office. This is a matrimonial agency. You will find the International Purchasing Agency two doors to the left.—*Ex.*

Joshua Hendy Machine Works is the place to go for light and heavy castings. They are dealers in all kinds of machinery of their own manufacture, this company was incorporated Sept. 1882 having been engaged for years in furnishing engines and pumps for buildings and in fact machinery of all kinds for almost every conceivable purpose. 39 to 51 Fremont street are their headquarters, with foundry and warehouse at Kearny, Bay and Francisco streets.

CITY BUILDING NEWS.

Army near Valencia. To build; owner, A. Chamberlin; contractor, F. V. Acker; signed, Feb. 21; filed, Feb. 28; cost $4000.

Berry near 5th. Brick warehouse; owners, Somers & Co.; contractor, W. P. Smith; cost $8000

Bush near Buchanan. Alterations and additions; owner, Patrick and Mrs. A. Walsh; contractor, John L. McLaughlin; signed, Feb. 15; filed, Feb. 18; cost $1120.

Bush near Laguna. To build; owner, Henrietta Ann Forbes; architect, R. H. White; contractor, John G. Adams; signed, Feb. 16; filed, Feb. 18; cost $6999.

Brannan near 8th. Two-story stable; owners, McNab & Smith; architect, Emil John; contractor, Geo. H. Walker; signed, Feb. 18; filed, Feb. 19; cost $8740.

Brannan near 5th. Rough carpenter work; owner, D. Nugent; architect, J. J. Clark; contractor, Cameron & McDonald; signed, March 6; filed, March 6; cost $6970.

Brannan near 5th. Brick for church; owner, D. Nugent; architect, J. J. Clark; contractor, San Joaquin Brick Co.; signed, March 7; filed, March 7; cost $7.87½ per thousand.

Birch Ave. near Buchanan. All work on a building; owner, Mrs. T. N. Van Ness; architects, Wright & Sanders; contractors, Liebert & Hoffman; signed, Jan. 3; filed, Feb. 20; cost $2600.

Bush near Laguna. Plumbing; owner, Henrietta A. Forbes; architect, R. H. White; contractor, G. C. Sweeney; cost $980.

Broadway near Stockton. To build; owner, V. Pucinelli; architect, E. Depierre; contractor, P. A. Antonelli; signed, March 9; filed, March 9; cost $9,000.

California and Jones. Brick and stone building; owner, Nob Hill Development Co.; architects, Bugbee & Gash; contractor, D. Jordan; signed, March 4; filed, March 11; cost $200,000.

California near Baker. Alterations and additions; owner, Margaret Skaine; architect, J. P. Brady; contractor, James O'Sullivan; signed, Feb. 20; filed, Feb. 25; cost $2165.

California Ave. near 30th. To build; owner, Nils Linberg; contractor, J. Gillogley; cost $1475.

California near Polk. Additions and alterations; owner, Samuel Moffatt; architect, H. W. Lillie; contractor, Geo. R. Lang; signed, Feb. 27; filed, Feb. 27; cost $2525.

Castro near 18th. To build; owner, Mrs. Mary Kipp; architect, John T. Kidd; contractor, C. W. Dibble; signed, March 1; filed, March 2; cost $3,600.

Capp near 16th. To build; owner and builder, G. Ratto; cost $6000.

Church and Liberty. To build; owner, Mrs. Mary E. Crawford; architect, W. H. Wharff; contractor, Jacob Schuler; signed, March 2; filed, March 8; cost $3225.

Creek Lane (Eric street) near Folsom. To build; owner, Albert A. Miller; contractor, H. R. Schmuckert; signed, March 9; filed, March 9; cost $2610.

Cora near Visitation Ave. To build; owner, Mrs. C. Bergold; architect, Geo. Strohmeir; contractor, H. A. Tessmer; signed, Feb. 7; filed, Feb. 15; cost $1150.

Cole near Waller. Six two-story frame residences; owner, William Hinkel; architect, Wm. Keenig; days work; cost $24,000.

Corbett Ave. near Hattie. To build; owner and builder, A. Murry; cost $2000.

Davis and Washington. Carpenter work on brick building; owner, Estate of J. Ivancovich; architects, Pissis & Moore; contractor, J. W. Wissinger; signed; Feb. 11; filed, Feb. 23; cost $8675.

Davis near Washington. Carpenter work, etc., on brick; owner, Issac Kohn; architects, Pissis & Moore; contractor, J. W. Wissinger; signed, Feb. 11; filed, Feb. 23; cost $3500.

Douglass near 17th. Additions; owner, Cal. Brewery Co.; contractor, A. Huller; cost $5000.

Diamond and 25th. Two one-story frame cottages; owner and builder; T. A. Born; cost $6000.

Diamond near 25th. Two-story frame dwelling; owner and building; T. A. Born; cost $3700.

Eighth Ave. near California. To build; owner, Mrs. Z. Hawkes; contractor, A. W. Goss; signed, Feb. 13; filed, Feb. 14; cost $1960.

Elizabeth near Hoffman. To build; owner and builder; J. Anderson; cost $2000.

Fell and Masonic Ave. To build; owner, Charles H. Phillips; contractors, White Bros.; cost $6000.

Fell and Masonic Ave. Additions and alterations; owner, Charles H. Phillips; cost $1000.

Folsom near 7th. Alterations and additions; owner, Harris Samuel; architects, Salfield & Kohlberg; contractors, Petterson & Person; signed, Feb. 20; filed, cost $1651.

Fifth Ave. near Clement. To build; owner, Ernest Webner; architect, A. J. Barnett; contractor, Ed. Mooney; signed, Feb. 27; filed, March 1; cost $1300.

Franklin and California. Concrete and cement work; owner, Edward Coleman; architect, W. H. Lillie; contractor, Geo. Goodman; signed, Feb. 28; filed, March 2; cost $2375.

Franklin and California. Plumbing; owner, Edward Coleman; architect, W. H. Lillie; contractor, H. Williamson; signed, March 5; filed, March 6; cost $962.50.

Geary near Leavenworth. Excavations, etc.; owner, Percy Klien; architect, Emil Depierre; contractor, James A. Wilson; signed, Feb. 27; filed, Feb. 28; cost $1700.

Golden Gate Ave. near Laguna. Additions; owner, Mrs. Annie Fallon; architects, Martens & Coffey; contractors, Ackerson & Peterson; signed, Feb. 23; filed, March 1; cost $2180.

Hyde near Broadway. To build; owner, Cornelius Harrigan; architect, J. C. Colbrea; contractor, F. W. Maurice; signed, Feb. 5; filed, Feb. 13; cost $5300.

Hyde nerr Clay. Plumbing work; owner, Laura Hirshfeld; architects, Pissis & Moore; contractor, R. Rice; signed, Feb. 23; filed, Feb. 23; cost $1048.

Jackson near Locus Ave. Two-story brick; owner, Belle F. Lee; architect, Newton J. Tharp; contractors, Ingerson & Gore; signed, Feb. 12; filed, Feb. 15; cost $2852.

Jackson near Steiner. To build; John Spruance; architect, J. H. Littlefield; contractors, Blanchard & Clark; signed, Feb. 15; filed, Feb. 19; cost $5345.

Kentucky near Sierra. To build; owner, Hans Kroeger; architect, H. Geilfuss; contractor, F. Klatt; signed, Feb. 28; filed, Feb. 28; cost $1402.

Kingston Ave. and Mission Sts. To build; owner, John Wiese; architects, Martens & Coffey; contractor, F. Weinecht; signed, March 1; filed, March 4; cost $5083.

Laguna near Vallejo. Concrete foundations; owner, Caroline S. Townsend; architect, W. H. Wharff; contractor, Chas. Quast; signed, March 4; filed, March 4; cost $1620.

Laguna and Jackson. Hydraulic Ram Elevator; owner, W. F. Whittier; architect, E. R. Swain; contractors, Cahill & Hall Elevator Co.; signed, March 1; filed, March 6; cost $1225.

Lott near Grove. To build; owner, Richard English; architects, Martens & Coffey; contractor, I. J. Walsh; signed, Feb. 20; filed, March 6; cost $2688.

McAllister near Devisadero. To build; owner and builder; H. Keenan; cost $500.

Mission and 24th. Repairs and additions; owner, Thusenelda E. Ingram; architect, T. W. McKee; contractor, Ed. Boyyer; signed, Feb. 18; filed, Feb. 19; cost $3100.

Mission near Main. Four-story brick; owner, Eliza T. Grosh; architect, William Patton; contractor, W. A. Butler; signed, March 7; filed, March 8; cost $32,599;

Octavia near Greenwich. Cottage; owner, Mr. Tracy; contractor, J. W. Smith. cost $2000.

Octavia near Greenwich. To build; owner, W. C. Latham; architect, H. T. Bestor; contractor, Christian Andreson; signed, March 9; filed, March 11; cost $1400.

Pacific Ave. near Octavia. Capenter, masonry, plumbing, etc.; owner, Mrs. Elizabeth Dore; architect, Samuel Newsom; contractor, Richard Sinnott; signed, Feb. 12; filed, Feb. 16; cost $7375.

Presidio Reservation. Excavations, etc., for boiler house; owner, U. S. Government; architects, Percy & Hamilton; contractors, W. H. Flaherty; signed, Feb. 19; filed, Feb. 21; cost $7000.

Presidio Reservation. Fort Point 1st brick dynamite building; owner, U. S Government; architects, Percy & Hamilton; contractor, D. T. Francouer; signed, Feb. 25; filed, Feb. 25; cost $1400.

Point Lobos Ave. near 5th Ave. Macadamizing, etc.; owner, La Societe Francaise, etc.; architect, Emile Depierre; contractors, Warren & Malley; signed, Feb. 13; filed, Feb. 14; cost $2100.

Polk and Elm. Cottage; owner, R. H. Lyod; architect, B. E. Henriksen; contractors, Doyle & Son; signed, March 1; filed, March 2; cost $3280.

Polk and Sutter. To build; owner, M. De Young; architect, Clinton Day; contractor, Robert Frost; signed, March 5; filed, March 6; cost $31,500.

Pierce near Greenwich. Alterations and additions; owner, F. G. Eickhorst; architect, Emil John; contractor, Alfred Neville; signed, March 4; filed, March 8; cost $1250.

Second Ave. near California St. Cottage; owners, Lee Kahn and wife; contractors, White Bros.; signed, March 4; filed, March 4; cost $2088.

Second Ave. near Clement. To build; owner, H. Frohman; architect, H. Kraetzer; contractor, B. J. Taylor; cost $3500.

Second Ave. near Lake St. To build; owner, Thos. G. Parker; architect, H. J. Kraetzer; contractor, Byron I. Taylor; signed, Feb. 15; filed, Feb. 15; cost $2800.

Steiner near Haight. To build; owner, Mrs. E. Winters; contractor, Casper Zwerlein; signed, Feb. 12; filed, Feb. 15; cost $2210.

Spear near Howard. One-story brick; owner, Janet C. Haight; architects, Herman & Swain; contractor, Daniel D. Cameron; signed, Feb. 16; filed, Feb. 18; cost $2575.

Spear near Howard. Brick and mason work; owner, Janet C. Haight; architect, Herman & Swain; contractor, J. O'Sullivan; signed, Feb. 20; filed, Feb. 20; cost $1818.

Shotwell near 15th. To build; owner, S. LeRoy; architect, F. Vandervecken; contractor, S. F. Building Co.; cost $4500.

Sixteenth and Church. Three-story frame and brick building and two-story frame in rear; owner, Joseph Harvey; architects, Havens & Toepke; contractors, Ackerson & Paterson; signed, Feb. 28; filed, March 1; cost $8100.

Taylor near Green. To build; owner, H. H. Christiansen; contractor, A. Waller; cost $2500.

Third Ave. near Clement. Cottage; owner, Geo. Allen; contractor, H. Rowe; cost $1800.

Tenth Ave. near Pt. Lobos. Cottage; owner, G. Schmeiser; contractor, G. T. Pall; cost $1800.

Tenth near California. To build; owner, C. Stoltz; contractor, D. A. McIntosh; cost $2000.

Twenty-third near Folsom. To build; owner, Jas. H. & L. A. Anderson; contractors, Hyde & Cox; signed, March 1; filed, March 6; cost $1850.

Twenty-fourth and Sanchez. Cottage; owner, P. Gumm; contractor, R. Frost; signed, March 2; filed, March 2; cost $1828.

Thirtieth near Laikley. To build; owner, Peter Braunbeck; contractor Robert Frost; signed, March 2; filed, March 7; cost $1500.

Washington near Scott. To build; owner, Agnes J. Jones; architect, H. D. Mitchell; contractor, J. Norris; signed, March 2; filed, March 7; cost $4614.

Webster near Pine. To build; owner, L. R. Ellert; architects, Shea & Shea; contractor, James Mooney; signed, Feb. 12; filed, Feb. 20; cost $5400.

DUNHAM, CARRIGAN & HAYDEN CO.

17 and 19 BEALE ST., San Francisco Cal.

WE show here an illustration of our **AMERICAN SLIDING DOOR HANGER** for which we claim unusual advantages, great saving in time and expense, and superior excellence in operation, together with the following features not obtained or claimed in other hangers.

TRACKLESS—We obviate the use of a track above or below, and the special framing necessary where a track is used.

NO WHEELS There are no wheels to bind by reason of warped or sagging track. The movement is perfectly PARALLEL and insures against binding.

NOISELESS The operation is noiseless and extremely easy.

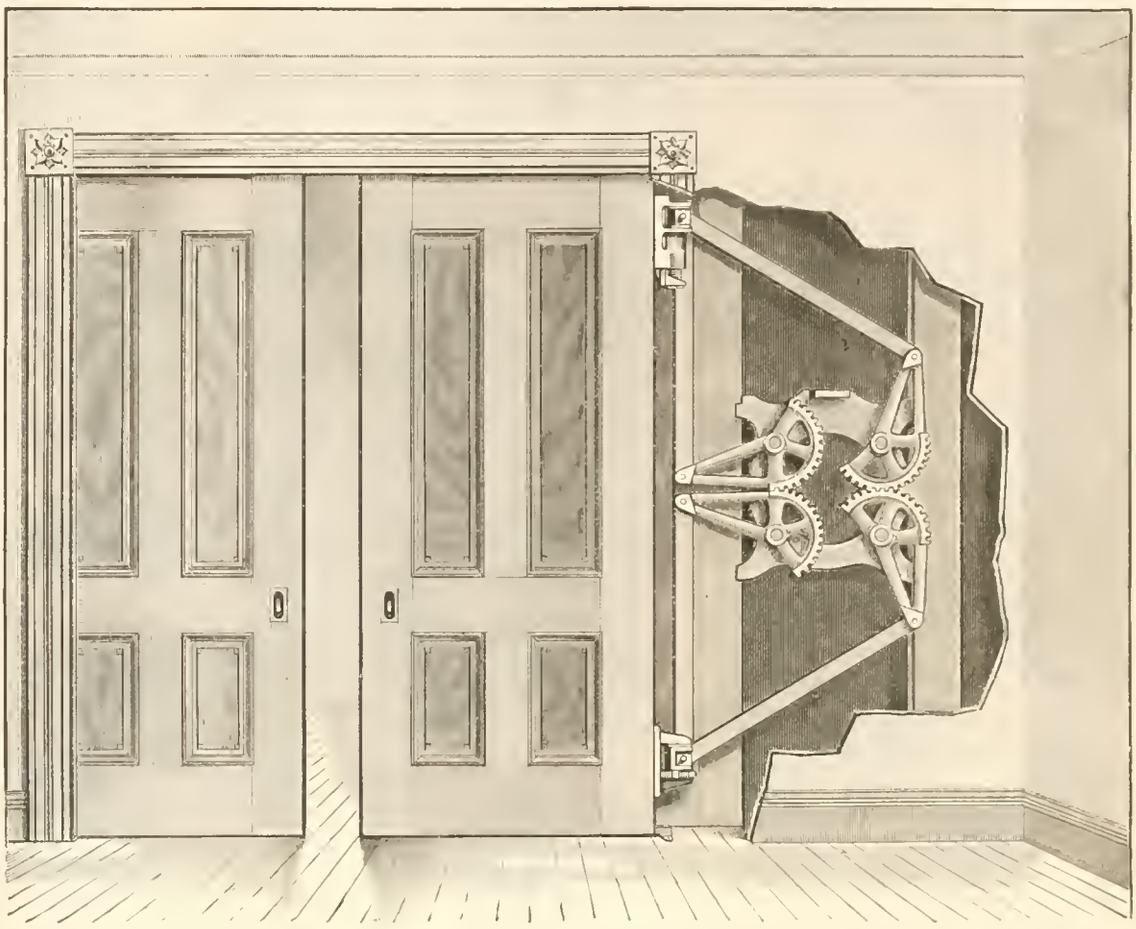
DOORS EASILY ADJUSTED—The door can be readily adjusted plumb, raised or lowered by drawing them into the opening which gives easy access to the adjusting screws.

QUICKLY PUT UP—The Hangers can be put up in one-third the time required for overhead hangers.

SUBSTANTIAL—The parts are made to carry three times the weight of doors of the sizes given.

ONE PACKAGE—We pack the Hangers fully assembled and ready to attach, in ONE package, including all bolts and screws necessary.

☞ See a full size working model at our store.



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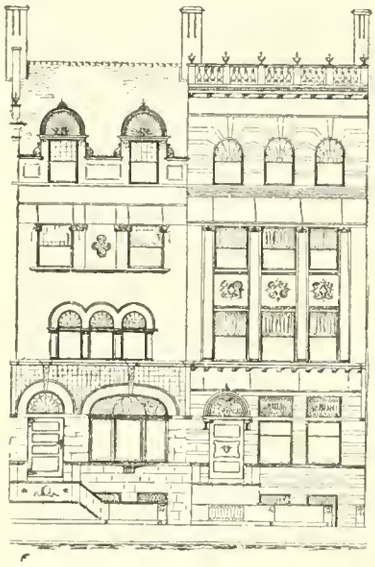

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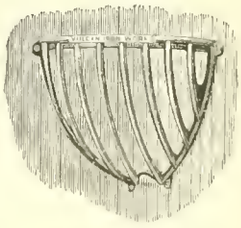

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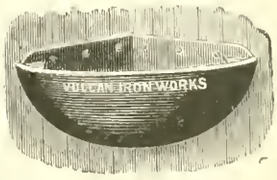

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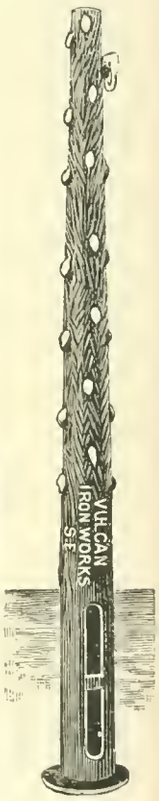

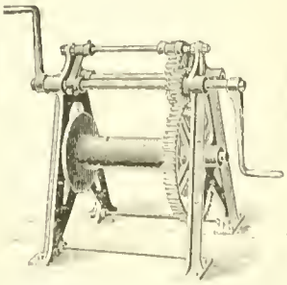

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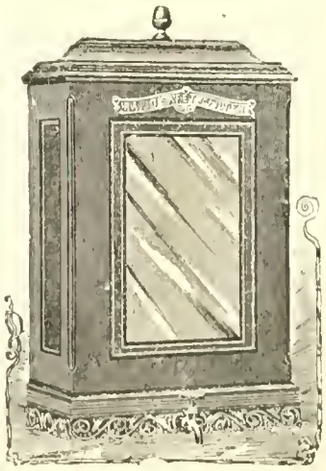

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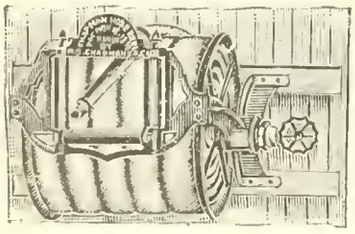

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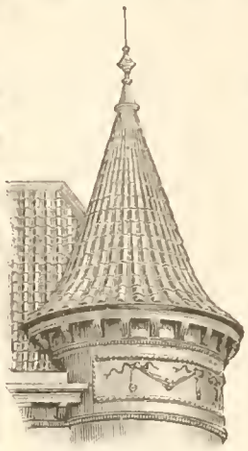

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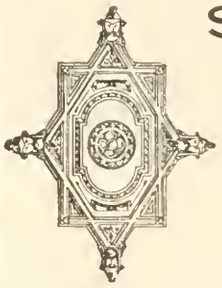

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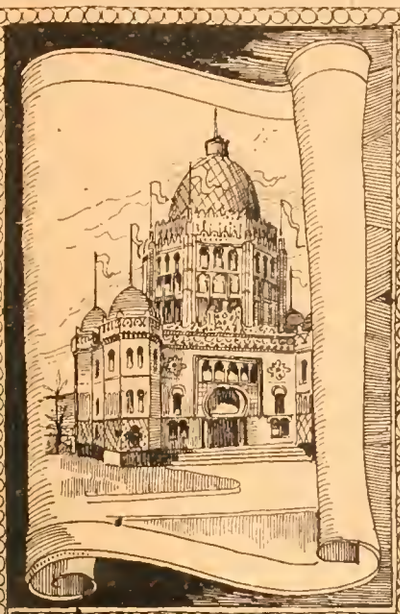

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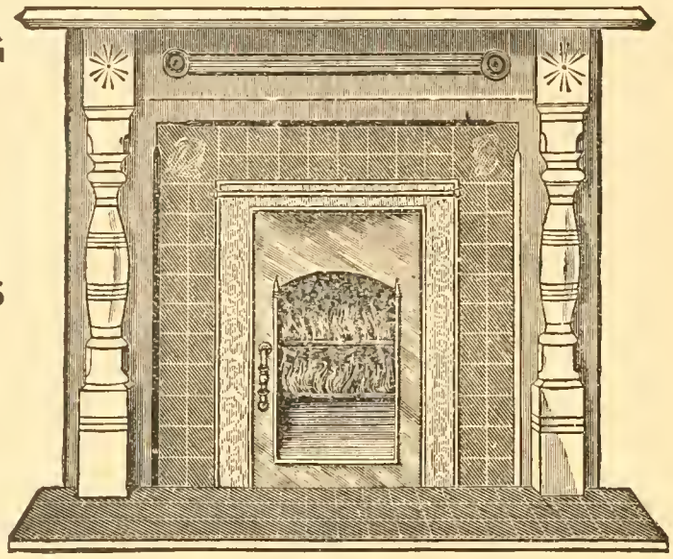

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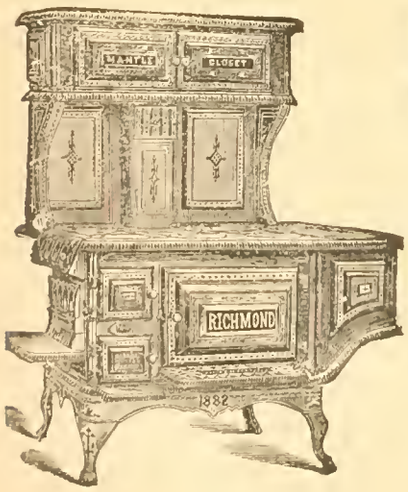

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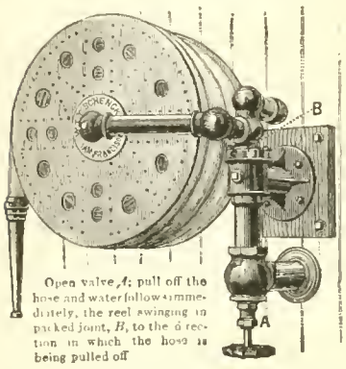

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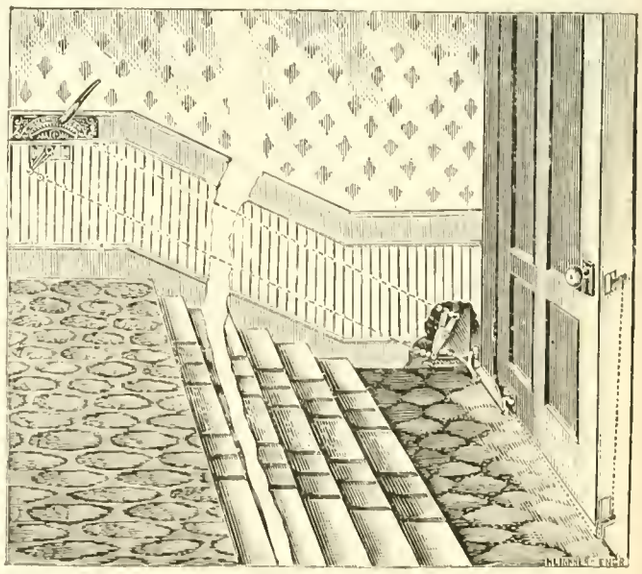

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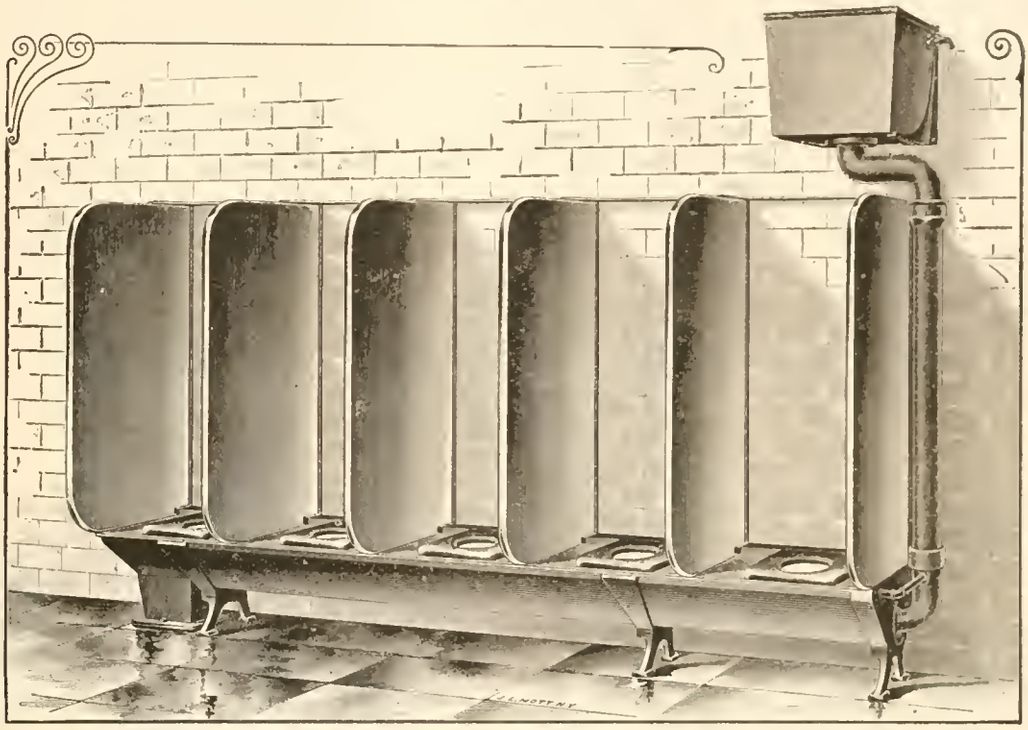

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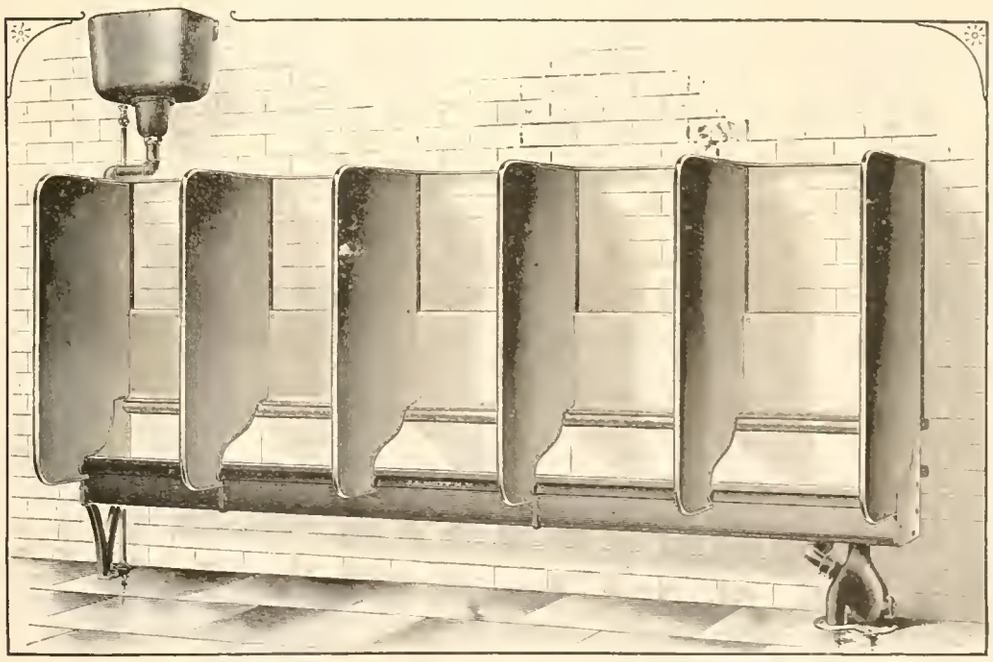

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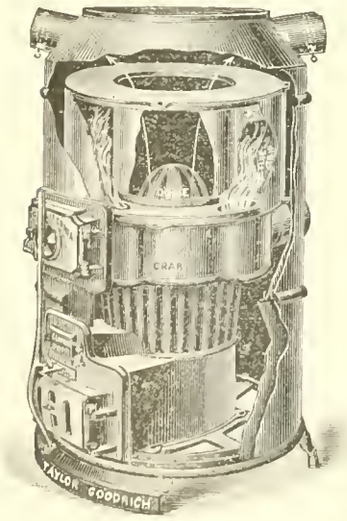

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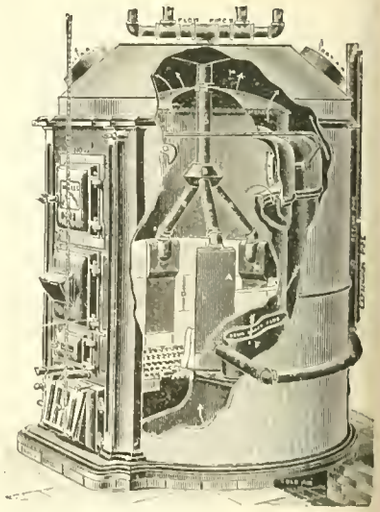

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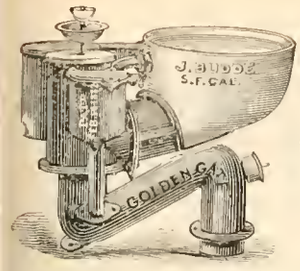

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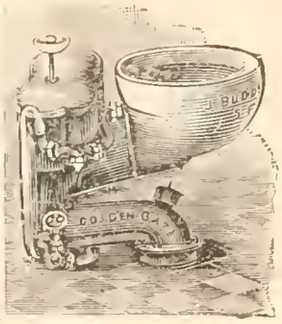

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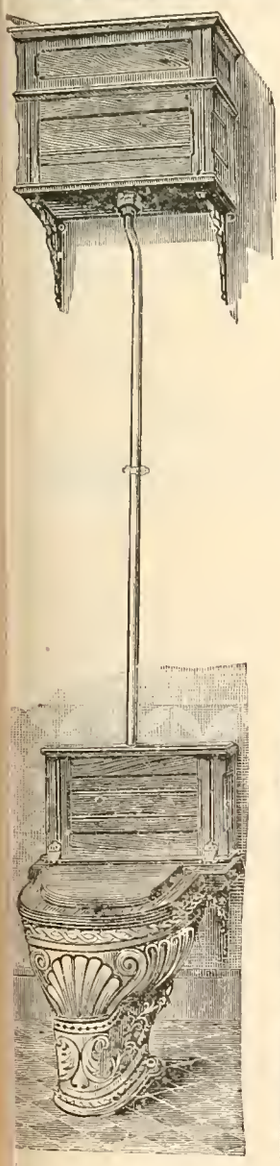

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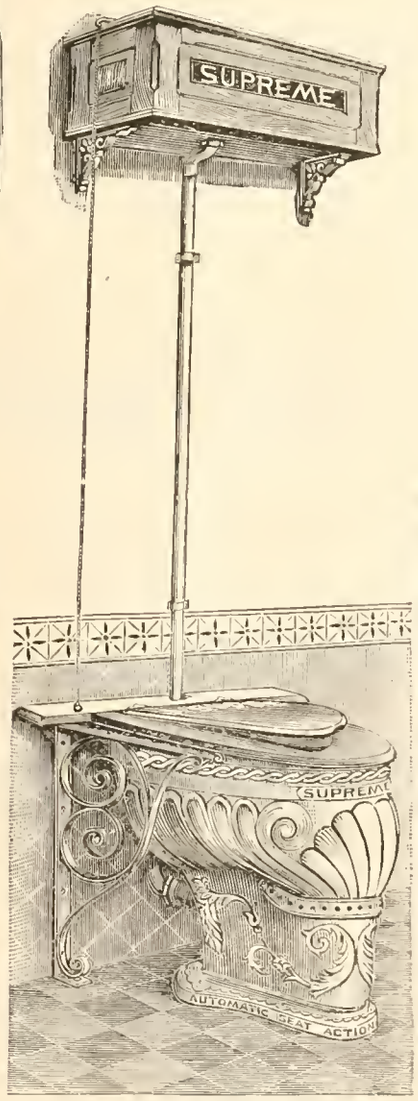

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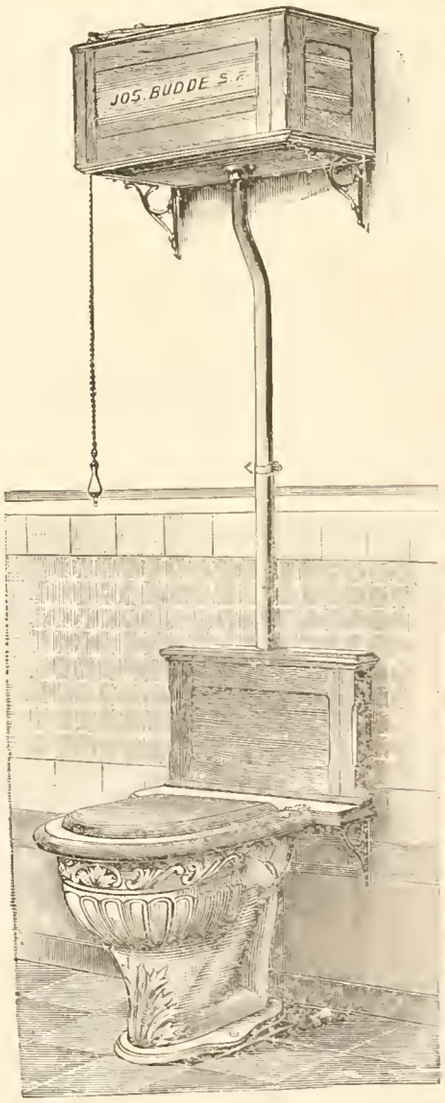

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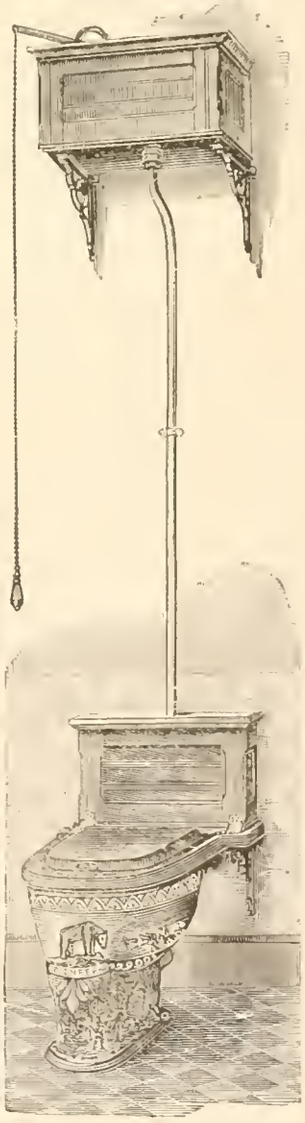

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A MONTHLY JOURNAL DEVOTED TO THE ARCHITECTURAL INTERESTS OF THE PACIFIC COAST.

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OUR Eastern exchanges contain full descriptions of the Orchard street disaster and the attempts to place the responsibility therefor on the shoulders of the proper persons. The facts of the case are as follows: An interior cross wall of brick was to be carried by an iron girder, resting on the side walls of the building. The bearing was not sufficiently strong to carry the weight, and gave way with fatal results. The plans for the building had been passed on and approved by the Department of Buildings of New York City, and theoretically would have been within the limits of safety. Owing to the poor quality of bricks used, no bonding, and poor mortar laid in freezing weather, the disaster occurred. The Coroner's jury blamed the deputy inspector who passed the plans as being grossly careless, but the Grand Jury absolved him from blame.

The real responsibility appears to belong to the person supervising the carrying out of the work, and the Grand Jury who reported on the matter recommended "that no building be erected hereafter, or changes made to an existing building, without the employment of a duly 'licensed' architect who shall draw the necessary plans and specifications of the same and superintend the same from first to last during its progress" and also recommended that "no person be allowed to practice the profession of architecture, make plans and specifications for a building or superintend its erection unless duly licensed for that purpose and registered."

Public indifference and private greed and shortsightedness have so far hindered or entirely thwarted the efforts of the architectural profession to exclude by law, the incompetent and incapable practitioners, and it will take more than one fatal accident to interest the public in the important subject of safe building.

The law presented to our last California Legislature, designed to meet the requirements of the more complicated construction of advancing civilization, by restricting the right to practice architecture to those proving themselves competent, fared no better than the law proposed to the Legislature that preceded it, nevertheless the profession men, who see the necessity of some such law for the safety and protection of the public, will continue their crusades in this and other States, until they succeed in their meritorious

efforts to raise the proficiency of the architectural practioner to such a standard that fatal accidents will no longer be cause by faulty construction and imperfect execution. This can only be done by prohibiting the grossly incompetent from practicing.

THE MANUFACTURING INTERESTS OF THE PACIFIC COAST.

A PAPER READ BEFORE THE MANUFACTURERS AND PRODUCERS CONVENTION, BY MR. OSCAR LEWIS.

Mr. President and Gentlemen of the Convention:—

To every man connected with the manufacturing interests of the Pacific Coast (and especially to those engaged in the Building Trades) the necessity of this Convention is but too plainly apparent; and the varied interests here represented show to us all that it is not only one industry that is threatened with disaster, if not annihilation, but that all are alike passing through the most disastrous business depression that has ever visited California. We all of course expect to take our share of these periodical upheavals in industrial and financial circles that sweep over our entire country, but we know, that aside from this, manufacturing has been on the down grade for some years past, and each year sees a greater number of firms, either going out of business altogether, or becoming importers in part at least, of the various articles in which they deal.

"It is a condition, not a theory that confronts us." We cannot disguise it. The time has arrived, when not only the employer, but employe, the mechanic, the farmer, the merchant and the real estate owner, in fact all who have a hope in what California ought to be, must stand together, and putting aside our petty differences, work in harmony for the maintaining and building up of the various industries of this Coast.

In connection with the Building Trades let me give you some examples of selfishness, or short-sightedness, of some of our real estate owners and contractors—and I may truthfully say that a good many of them brought little more when they came to this State, than they did when they came into the world. But before doing so, I will say that our local architects, builders and workmen will compare favorably with any that can, or have been, imported from any part of these United States. We fall short only in the art of combining modern conveniences with modern ugliness, and some of us are bold enough even to attempt that; but at all events there is no reason why San Francisco mechanics should not build San Francisco's buildings.

Yet the iron stair cases and ornamental iron work, costing in the neighborhood of $80,000, of one of our large buildings on Montgomery street, was made by Winslow Bros., of Chicago. It was not even bid on here, as in the opinion of the Chicago architects of that building, it could not be done here. I do not think it could have been done here as poorly. It was condemned and would have been rejected, but for the delay such rejection would have caused. This fact, and that great boon to botch workmanship—lead and putty—pulled it through.

The carpenter, or mill work, the entire wood finish was also made in Chicago, shipped out here and nailed in position by a local contractor; and at this time over one half of the wood-working, machinery and mill hands of San Francisco were idle, and hundreds of worthy men were standing in line for hours in the rain to obtain a card that would entitle them to work in the Park for a dollar a day.

Why only recently, in the midst of our excitement over the laudable "Valley" Railroad enterprise, we found time to send a small job of iron work to Winslow Bros. of Chicago, while iron-workers walked the streets of San Francisco idle. This reminds me of Artemus Ward, who was in favor of enlisting and sacrificing all his wife's relatives, including his mother-in-law to put down the Rebellion.

And yet, Mr. President and Gentlemen of the Convention, we are all more or less to blame in this matter, for it seems to be a California fashion to shout for the opposition and travel on the old line. Even at this moment, when all Californians seem to be banding together in their effort to build up the industries of the State and City, the Eastern drummer—or human toredo—is at work, boring around the architects' offices with his samples of interior wood finish, seeking to lay his plans to procure wood work that will soon be required for our large business buildings and residences that are now in course of construction.

Owners and Contractors of the Coast, give the mechanics of California a chance: If you want the Eastern woods that are not grown here, import the lumber and have the work done here, unless the Railroad treats you as it does the wire nail industry—charge sixty cents a hundred on wire rods or the raw material, and thirty cents on the finished article.

Gentlemen, it does seem to me that those of us who have invested large amounts of money in rolling-mills, ship-building works, wire works, foundries and wood-working plants, have made a mistake, when the great iron and steel manufactuer of Pennsylvania, can be fully represented and equipped on this Coast, by a very affable gentlemen, occupying a 7x9 office, containing a roller top desk and a telephone; and while thousands of extensive Eastern manufacturers and wholesale houses, are represented by nice young men with alligator skin grip-sacks, who adorn themselves with diamond pins, four-in-hand ties, Willie-boy coats and custard pie shoes, while the people of San Francisco sigh for a "Half-Million Club," so do I sigh for a half million clubs.

But enough of complaint: Admit it all, and what is the remedy? Boycott Eastern made goods? No! rather build up our own State and let others build up theirs.

It has been said that the high rate of wages prevents manufacturing. While it is true that wages here are higher than in the East, we hope that the rates in the East may be raised rather than ours lowered. However, notwithstanding the fact that both labor and materials are higher here, our greatest difficulty is local prejudice, and the limited market we have to supply: For we know that the cost of manufacturing is largely governed by the quantity of a given article manufactured.

It is to be hoped that this Convention will go far towards convincing the people of this Coast, without regard to age, color, or previous condition, that their true interest lies in standing loyally together, and so far as possibly supplying their wants from the home market. Use the California produced article, even if it costs a little more, for the extra cost will come back to you tenfold in the general prosperity of the State.

A competing railroad has been advocated. There would be some merit in that, for to us manufacturers it would be no lingering death, and we could rent our plants as storehouses for the reception of its cheap freight and Eastern made goods that would flood San Francisco.

After thirty-six years residence in California, I believe in

her resources; I have faith in her people, and I feel that with the commencement of the Valley Road, and the general awakening of the people, the revival of our mining, agricultural and industrial interests, a new era of prosperity will be felt over our entire State and Coast: If on the other hand, the people will not awake, will not protect their own interests from the tomahawk of the middle-man, or the grasping greed of our soulless monopolies, then at least save us from the hands of the Health Officer, and give us an elegant funeral, as will, in the language of Jimmie McGinn, make it a pleasure for us to die; dig the grave wide, dig it deep, and place it face downwards so that we may gaze on Chicago.

CODE OF ETHICS,

IN CONFORMITY WITH THE BEST STANDARDS OF PRACTICE, RECOMMENDED TO ITS MEMBERS BY THE BOSTON SOCIETY OF ARCHITECTS.

Adopted by the Society, February 1, 1895.

SECTION 1. No member should enter into partnership, in any form or degree, with any builder, contractor, or manufacturer.

SEC. 2. A member having any ownership in any building material, device, or invention, proposed to be used on work for which he is architect, should inform his employer of the fact of such ownership.

SEC. 3. No member should be a party to a building contract except as "owner."

SEC. 4. No member should guarantee an estimate or contract by personal bond.

SEC. 5. It is unprofessional to offer drawings or other services on approval and without adequate pecuniary compensation.

SEC. 6. It is unprofessional to advertise in any other way than by a notice giving name, address, profession, and office hours, and special branch (if such) of practice.

SEC. 7. It is unprofessional to make alterations of a building designed by another architect, within ten years of its completion, without ascertaining that the owner refuses to employ the original designer, or, in event of the property having changed hands, without due notice to the said designer.

SEC. 8. It is unprofessional to attempt to supplant an architect after definite steps have been taken toward his employment.

SEC. 9. It is unprofessional for a member to criticise in the public prints the professional conduct or work of another architect except over his own name or under the authority of a professional journal.

SEC. 10. It is unprofessional to furnish designs in competition for private work or for public work, unless for proper compensation, and unless a competent professional adviser is employed to draw up the "conditions" and assist in the award.

SEC. 11. No member should submit drawings except as an original contributor in any duly instituted competition, or to secure any work for which such a competition remains undecided.

SEC. 12. The A. I. A. "schedule of charges" represents minimum rates for full, faithful, and competent service. It is the duty of every architect to charge higher rates whenever the demand for his services will justify the increase, rather than to accept work to which he cannot give proper personal attention.

SEC. 13. No member shall compete in amount of commission or offer to work for less than another, in order to secure the work.

SEC. 14. It is unprofessional to enter into competition with or to consult with an architect who has been dishonorably expelled from the "Institute" or "Society."

SEC. 15. The assumption of the title of "Architect" should be held to mean that the bearer has the professional knowledge and natural ability needed for the proper invention, illustration, and supervision of all building operations which he may undertake.

SEC. 16. A member should so conduct his practice as to forward the cause of professional education and render all possible help to juniors, draughtsmen, and students.

ARMY OFFICERS AS SUPERINTENDANTS OF PUBLIC BUILDINGS.

THE old scheme, of having officers of the United States Army superintend the construction of public buildings, has been revived, according to the Washington papers; and the usual frightful examples of the slowness of progress on such buildings, under the ordinary methods, are brought up to show how much more quickly they would be finished if the military arm took hold of them. To complete the alluring picture, we are told that the Congressional Library, which is nearing completion, under military direction, and has certainly been rapidly built, is "a gem of art," as if all we had to do, to scatter gems of art speedily around the country, was to transfer the Supervising Architect's office to the Army Headquarters. It is hardly necessary to say that this agitation is decidely pernicious. That the Congressional Library is a fine building, well and quickly built, we acknowledge with pleasure, but, notwithstanding the remarkable and exceptional qualifications of General Casey and Colonel Green for architectural undertakings, it is quite capable of improvement as a work of art, and the rapidity with which it has been carried out is due as much to the energy with which the officers cut off Congressional interference, and demanded appropriations, as to any hidden capacity of the military mind for making bricks and stones jump into their places without assistance; while the Pension Building, the other great example of military architecture, though quickly built, for the same reasons, is about as far from being a "gem of art" as any structure within our knowledge. The fact is that the people who can build most rapidly, skilfully and beautifully are the people who have devoted their lives to learning how to do so, namely, the architects; and the sooner the public stops dodging around them, and trying to utilize politicians and generals and carpenters and what not, in place of them, the better off it will be.—*The American Architect and Building News.*

PRACTICAL SUGGESTIONS RESPECTING THE VENTILATION OF BUILDINGS.

Continued from March Number.

FIVE. When a room is heated wholly or chiefly by warm air, the distribution of heat in the room will be almost wholly controlled by the location of the foul-air outlets. The natural course of the air current is this: the heated air

rises to the ceiling, spreads out, and coming in contact with the outer walls which are lower in temperature than the inside walls, especially the windows, it is cooled and falls to the floor. It is evident then that as the outer walls and the proportions of the room adjacent to them are necessarily the coldest part of the room, the circulation of the air through the room and the proper distribution of the heat will be facilitated by placing the foul-air openings along the outer walls and preferably under the windows. If the foul-air outlets are placed in an inner wall or at the floor near an inside wall, one effect will be to draw toward this opening warm air which ought to have been utilized in warming the outer walls. Another effect, and one of the most disagreeable features attending this method of placing the foul-air outlets, is that the air which has been cooled by contact with the windows and outer walls and by its greater specific gravity has fallen to the floor, will be drawn the whole distance across the floor to the opening on the opposite side, thus constantly maintaining at the floor a stratum of cold air. An arrangement of this sort is a very frequent cause of cold floors, and consequently cold feet, and the resulting headaches from which the occupants of such a room are almost sure to suffer.

The foul-air outlets should be placed as near the floor as possible. The opening may be in the base board or in the floor itself The only objection to the latter method is the collection of dust which is likely to be swept into the opening.

6. The ventilating ducts communicating with the foul-air outlets should have a sectional area equal to the free area of the openings with which they communicate. This capacity should be maintained until the duct reaches the ventilating shaft, and should be increased if several turns are made in the duct as each square turn has the effect to diminish the velocity of the air current nearly one-half. Square turns should never be made, and the ducts should be enlarged at the angles where a turn is necessary. In case a duct must be carried for some distance, its capacity should be increased fifty or even one hundred per cent to compensate for the great amount of friction occasioned by distance. The ventilating ducts should of course be made tight. For this purpose it is necessary that they should be lined with metal or some other durable material. Even well-seasoned lumber will shrink and open up large cracks, by which the efficiency of the duct will be very materially diminished. It is also a wise plan to construct ventilating ducts of some non-combustible material, or at least to line with such material as a caution against fire.

Only ducts coming from the same room or floor should be connected with a common ventilating shaft. Each story must have its own foul-air shaft; otherwise the counter drafts occasioned by the opening of doors and windows, especially in moderate weather, or the adverse influence of winds, will be certain to lead to contamination of the air of one room by the air of another room with which it is in communication through the common shaft.

It is of the utmost importance to supply each floor, and if possible each room, with its own independent ventilating shaft running as directly as possible to the open air without any connection with other ducts.

7. The location, sectional area, and height of the ventilating shaft, are questions of very great interest and practical importance. As regards location, it is always better that the ventilating shaft should when possible be located within the building, as in an inside wall; this insures a temperature equal to that within the building, and so secures a constant and positive draft, whenever the building is supplied with artificial heat. If, in addition, the ventilating shaft can be located adjacent to the chimney, or if the smoke can be carried up through it by means of a boiler iron stack or a stack constructed of sewer pipe, a still higher temperature of the air in the ventilating shaft and hence a better draft will be secured.

The sectional area of the shaft will depend upon the amount of air to be removed and the height of the shaft.

By a careful study of the tables of Parke and others, I have been able to construct a simple formula which is of great practical service in determining these two questions. The following is the formula: The square root of the height of a shaft, multiplied by the square root of the difference in temperature between the air in the shaft and the outside air, divided by four, equals the velocity of the air in the shaft in feet per second. In using this formula, it is of course necessary that two of the quantities should be known. The difference in temperature is a pretty constant factor. In fixing this the minimum difference should of course be chosen rather than the maximum, as a ventilating shaft which may have an ample capacity in extreme cold weather when the great difference between the external and internal air would secure a powerful draft, would be quite insufficient to supply the necessary amount of air in moderate weather. I have chosen as a basis for obtaining the minimum difference id temperature, the temperature of 45° F. for external, and 70° F., the usual internal temperature. As a temperature much higher than 45 degrees, doors and windows are likely to be opened, and hence the working of any ventilating apparatus would be interfered with. The difference between 45° and 70° is 25, which may be fairly taken as a basis for calculation.

The height of the ventilating shaft is usually determined by the architect, who considers it with reference to the architectural effect in the building. When this is given, we have but to take the suqare root of the known height of the chimney, multiplied by the square root of 25 which is 5, divide the product by 4 and you have as a result the velocity at which the air will travel in the shaft in feet per second. It only remains to divide the total number of cubic feet to be removed per second by the velocity of the air per second, and the result is the sectional area of the shaft which is sought. Let us take a simple example by way of illustration. Given the height of the shaft 50 feet, and the amount of air to be furnished 72,000 cubic feet per hour or 20 ft. per second, the formula would work out thus:—

$\frac{1.50 \cdot 1.25}{4}$ = Vel. in ft. per sec. = 9 ft. $\frac{20}{9}$ = 2.22 sq. ft., the necessary sectional area of the shaft.

If the area of the ventilating shaft is given, the height being left to be determined, it is only necessary to know the amount of air to be removed, the difference between the internal and external temperatures, and to fix upon the velocity at which the air shall travel. The sectional area of the shaft must often be determined by the conveniences of construction, being governed by the plan of the building. A very safe rule is to make the sectional area of the ventilating shaft equal to the combined sectional areas of all the ducts leading into it. It is possible to secure efficient ventilation with a ventilating shaft which is somewhat smaller than this, but this is unquestionably the safest rule to follow. To determine the rate at which the air will travel, it is only necessary to divide the amount of air in cubic feet required per second, by the sectional area of the shaft expressed in

feet. With these data the determining of the required height is a very simple problem, using the formula which has already been given. An example will make this entirely clear.

Let us suppose that the conditions are as follows: air is required for 48 students. At 2,400 cubic feet per hour for each, the total amount needed would be 115,200 cubic feet per hour, or 32 cubic feet per second. The combined area of ducts of sufficient size to allow the transmission of this air at the rate of 5 feet per second would be $32 \div 5 = 6.4$ square feet, and the velocity will of course be 5 feet. The question we have to solve is what would be the necessary height of the ventilating shaft to secure this velocity, the difference in temperature being 25° F. The solution of this very practical problem is extremely simple. Bearing in mind the formula we will let H represent the height of the shaft, D the difference between the internal and external temperatures, and V the velocity of air per second; $\frac{\sqrt{H} \times \sqrt{D}}{4} = V$. Substituting the quantities which are known we have the following: $\frac{\sqrt{H} \times \sqrt{25}}{4} = 5$. Reducing we have $5\sqrt{H} = 20$; $\sqrt{H} = 4$; $H = 16$; that is, the height of the shaft required by the conditions named would be 16 feet. In most instances it is more convenient to employ a smaller shaft and one of greater height. Let us suppose such a case, in which the amount of air required per second is the same, namely, 32 cubic feet per second, and the sectional area of the shaft 4 square feet instead of 6. Dividing the amount of air required per second by the area of the shaft we have 8 as the velocity per second ($32 \div 4 = 8$). Our formula then would be as follows: $\frac{\sqrt{H} \times \sqrt{25}}{4} = 8$, reducing we have $5\sqrt{H} = 32$; $\sqrt{H} = 6.4$; $H = 40.96$. In this case the height of the shaft would be practically 41 feet. By the same method the necessary height of shaft for any given area may be readily determined.

From an economical standpoint, other things being equal, it is far better to secure increased efficiency by increasing the size of the ventilating shaft rather than its height, for the obvious reason that the capacity of a shaft for removal of air increases directly with the increase in sectional area; whereas the velocity of the air current increases in direct ratio with the square roots of the heights of the shaft, thus requiring that the height of a shaft shall be quadrupled to double its efficiency, while it is only necessary to double its sectional area to secure double efficiency. There is also a loss by increase of friction and of cooling surface, and in the disproportionate increase of expense of construction. The cost of increasing the efficiency of a shaft one hundred per cent., by increasing the velocity of the air current, will be very much greater than in securing the same result by increasing its sectional area.

Cases occur, of course, in which the stronger draft secured by increased height of shaft is essential to the efficient working of a ventilating system, or the accomplishment of a specific purpose.

8. When possible to do so it is unquestionably preferable to so plan a system of heating and ventilation that it will operate efficiently by the aid of "natural draft" only. Such a system is as nearly automatic in its action as any ventilating system can be made. A draft which depends upon a mechanical apparatus, as a pressure or suction pan, or even upon a steam coil or other form of heating apparatus in the ventilating shaft, is very likely to be found defective when efficiency is most needed. I have visited many large institutions provided with large ventilating fans, and have never yet found one in which the apparatus was in constant operation. In many cases it had been inoperative for years and was not in running order. In one case I was informed that the fan was started "whenever the odors in the ward became so strong as to be very noticeable." To my nose the odors were at that moment very strongly pronounced, and yet the fan was not in operation. The noses of managers and attendants become accustomed to odors to the presence of which they are constantly exposed, so that they cease to be a proper means of testing the condition of the air.

Some years ago the writer visited a large hospital, the air supply of which was wholly dependent upon a fan which was a pressure blower, and hence so constructed that when the fan was not in operation the opening for the entrance of air through the fan was very small. The fan was placed in the mouth of a tunnel nearly eight feet in diameter, just about the proper size for supplying the air to the hospital at a moderate velocity, but the opening from the fan had a sectional area of only about four square feet. The hospital had been in operation for some three years. The fan had never been in operation since the opening day, as it was run by a separate engine and was so far from the building as to require the attention of a special engineer when in use, and consequently the air supply of the hospital, which was filled with sick people of all classes, was limited to the small opening described, there being no other. It is certainly unwise to so plan the ventilating system of a large building as to make the inmates absolutely dependent upon the efficient working of a mechanical apparatus of this sort. Mechanical and other means of assisting "natural draft" are, nevertheless, valuable; and, in some instances, necessary accessories to a system of natural ventilation, especially for large buildings, as they furnish a means by which the disturbing influence of winds may be more or less completely overcome. The writer has had two large fans in use in buildings under his care for several years, as occasion has required. As usually constructed and employed, however, these appliances are almost useless from their inadequacy and inefficiency. This is especially the case when heat in the ventilating shaft is depended upon as a means of securing a strong draft, in consequence of the use of an amount of heating surface quite inadequate for the work required.

Ventilating shafts which are exposed on all sides, and even those which are placed in the outer walls of buildings must be heated or furnished with a fan to insure a constant draft. The amount of heating surface usually provided in such cases, is ridiculously small, and is not infrequently so placed as to be of very little value. When it is recalled that all the air supplied to a building must pass through the ventilating shaft, it will be apparent that a considerable amount of heat must be imparted to this air to produce a strong draft in case the chimney is so situated that the air loses a considerable amount of its heat before it is expelled from the chimney.

From experiments which have been made (Box) for the purpose of determining the heating capacity of steam pipes, we know that one square foot of surface of one-inch pipe (3 linear feet) will give off about 300 heat units per hour, or 5 heat units per minute under the conditions in which heating is required in a ventilating shaft. Five heat units will raise the temperature of 276 cubic feet of air 1° (1 cubic foot of air at 62° weighs .0761 lbs. The specific heat of air is .238. $5 \div .0761 \div .238 = 276$). Knowing the amount of air to be transmitted by the ventilating shaft per minute or second, it is easy to determine the amount of heating surface required to raise the temperature of the air one one or more degrees. It is only necessary to divide the amount of air transmitted per minute by 276 to determine the number of square feet of heating surface required to raise the temperature of the given quantity of air 1° F.

Taking, for example, a case in which, as in our last illustration, the amount of air required to be transmitted is 32 cubic feet per second, or 1920 cubic feet of air per minute, we have $1920 \div .276 = 6.95$, practically 7 square feet of heating surface, or 21 linear feet of one-inch pipe, necessary to raise the temperature of the air 1° F. To raise the temperature of the air 5°, which would be quite sufficient to insure the successful working of the shaft, would of course require five times as much heating surface, or 105 linear feet of one-inch pipe.

The most economical method possible for heating a ventilating shaft is the combustion of fuel in the shaft itself. A number of years ago, in studying the ventilation of the House of Parliament in London, by the aid of the assistant engineer, who kindly conducted me through the subterranean region of this great structure, I was surprised to find that the current of air in the great towers, which are not merely architectural features but constitute the ventilating shafts of the building, was maintained by means of a great heap of burning coal, which was placed exactly in the center of the shaft upon a high platform, the top of which was at about the same level as the top of the great horizontal ventilating ducts which entered the shaft at its bottom.

Fuel may be consumed in a shaft by means of a stove placed in a chimney, carrying the stovepipe up through it. In exceptional cases the smoke may be discharged directly into the shaft; but this arrangement is not always a safe one and hence cannot be recommended. The position of the heater is a matter of no small importance. I have sometimes seen a steam coil placed at the extreme bottom of the ventilating shaft, the first opening being several feet above it. In so placing the heater, there is very little circulation of air, and hence its efficient heating capacity is not utilized. To secure the efficient working of a ventilating shaft, the heater should be placed above the highest opening. It is, as a rule, not wise to have openings into a ventilating shaft at different levels, but if this arrangement cannot be avoided, the heater should certainly be placed above the highest opening; or if a long heater, placed against the side of the chimney, it should extend above the highest opening. Whether the heat should be concentrated near the lower portion of the shaft, or should be extended some distance along the inside wall, is a question which may be differently answered according to circumstances. There is an advantage in the extension of the heater some distance along the inner wall in that a better opportunity is afforded for radiation, and thus for heating the inner surface of the shaft, and so preventing the tendency to downward currents. It should be remembered, however, that the higher in the shaft the heater is placed the shorter will be the heated column, and hence, from this standpoint, the less the efficiency of the heat employed.

In conclusion, the writer wishes to disavow any attempt to make, in the foregoing, an extensive presentation of the subject of ventilation. Those who wish to make an extended study of the subject will find the means of doing so in the excellent work of Mr. Thomas Box, published by E. and F. N. Spon, 12 Cortlandt street, New York City. My aim in the preparation of this paper has been to present such practical points as I have gathered from a somewhat extended experience in planning the ventilation of large buildings in which I have had an opportunity to live for a series of years, studying the result of various methods employed, and to formulate a few simple rules which are useful for the working out of correct methods of ventilation in all ordinary cases, and which are much less cumbersome for use than the ponderous formulæ of Box and others who have undertaken to present this subject in a scientific way. I ought, also, perhaps, to call attention to the fact that, while the physical principles relating to heating, ventilating, etc., are correctly given by Box and other authors who have given much scientific data upon this subject, the suggestions made with reference to the supply of fresh air are, as a rule, widely at variance with the conclusions at which Parke, Angus Smith, and other investigators have arrived in the study of the question of ventilation from a sanitary and hygienic standpoint, and so are not to be relied upon. For example, Box puts the amount of fresh air required for each person per hour at 212 cubic feet, which is simply ridiculous, being less than one-tenth the amount shown by ample experience to be really necessary.

THE HALF-MILLION CLUB.

WE would call the attention of the Half-Million Club to the importance of having our city properly lighted by gas and electricity during the full month, before inviting strangers from a distance to visit our city in order to gain a favorable impression of its advantages as a residence, or business headquarters.

The new rule of having the city left in the dark for eight nights each month will not favorably impress those from the east who are accustomed to see their streets well lighted at all proper times. If the city is too poor to pay for such accomodation, it had better go out of business at once. If it is good economy to be in the dark nearly one-third of the month, why not save the other two-thirds of the expense and have no light at all?

A GRAND BOULEVARD.

A magnificent boulevard fifty miles long, from San Jose to San Francisco is the latest improvement talked of; many of the leading citizens along the route are interesting themselves in having a macadamized driveway constructed. If this magnificent scheme is carried out, we see no reason why it should not be, it will make one of the finest drives we know of. Another encouraging feature of this promised driveway, is that it shows the city is awaking to the importance of making improvements and if the spirit of enterprise is allowed to develop itself it will lead to still more startling inovations, that may for a time make old fogies sick at heart, but in the end will put money in their pockets.

Pluck and enterprise cause benefits to fall upon the just and the unjust.

ILLVSTRATIONS:

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

SEVENING Building, Oakland, C. Mau, Architect.

PRELIMINARY Sketch of Residence at Saucelito, Narine County, Havens & Toepke, Architects.

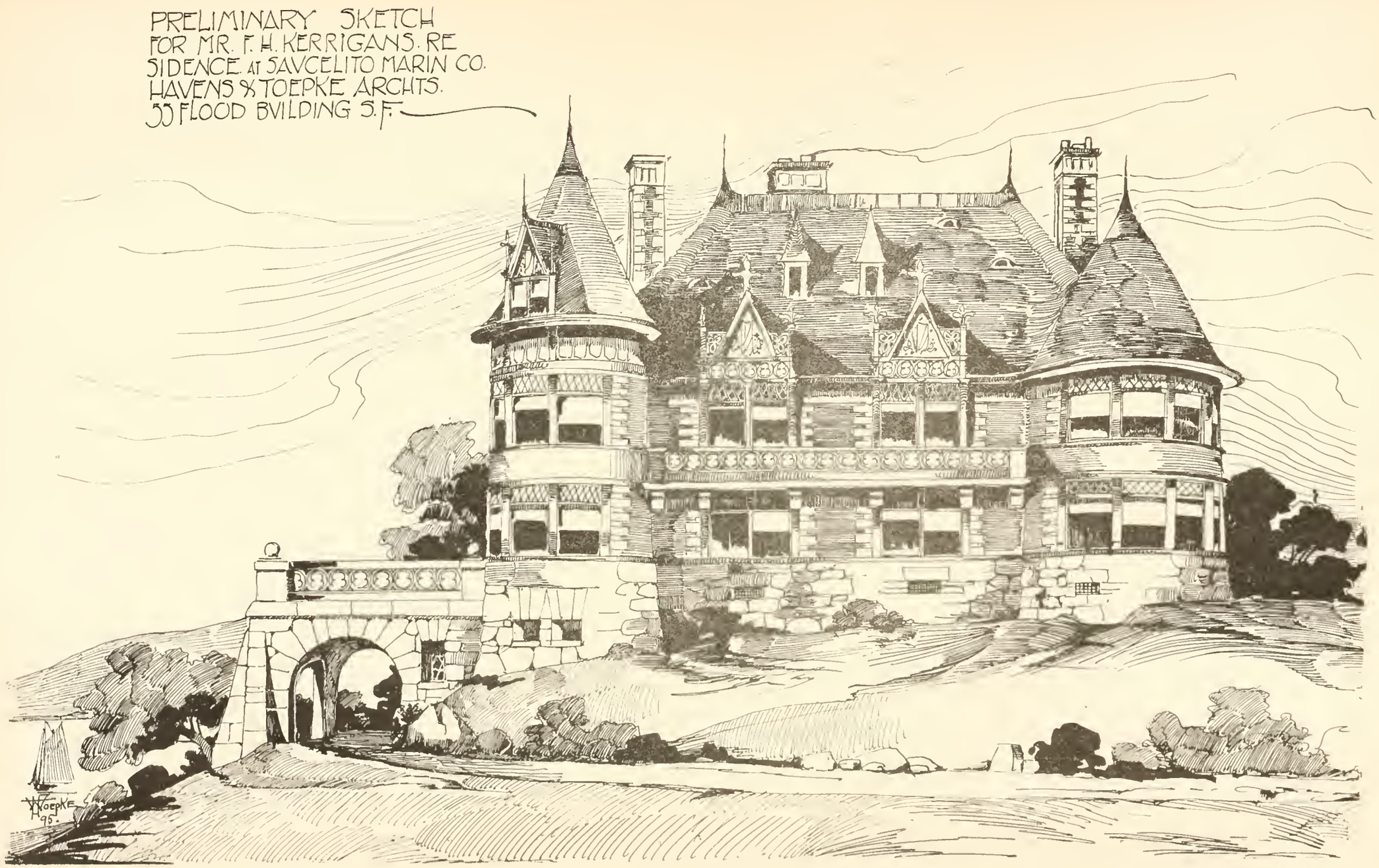
CITY Hall, Alameda, Competitive Design, Second Prize, Edmund Kollofrath, Architect.

RESIDENCE at Bakersfield, Cal., Henry A. Schultze, Architect.

AS a matter of information we would state that the original building of the California Safe Deposit and Trust Company's Building was designed by Wm. Patton, Architect; the additions and alterations are by Henry A. Schulze, Architect.

BRITTON & REY PHOTO LITH

COMPETITIVE DESIGN
ALAMEDA CITY HALL.
2ND PRIZE.
W. Edmund Kollofrath
Architect.


PRELIMINARY SKETCH
FOR MR. F. H. KERRIGANS. RE
SIDENCE AT SAUCELITO MARIN CO.
HAVENS & TOEPKE ARCHTS.
33 FLOOD BUILDING S. F.
H. TOEPKE
95.

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO

BRITTON & REY PHOTO LITH

VOL. XVI Nº 4 APRIL 1895

RESIDENCE FOR MR. W. S. ELZIS BAKERSFIELD CAL.

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street
Seth Babson, Pres. Geo. W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

EUROPEAN FORESTRY WORK.

NEARLY all the nations of Europe are engaged at the present time in no controlling the forest supply that every bit of public and private property in trees is placed under restriction against destructive cutting. The forests are all so highly protected, says the *Boston Herald*, and even where no state control exists, the freedom in cutting trees which exists in this country is unknown.

In Germany during the last twenty-five years some 300,000 acres have been reforested, and the government has granted $300,000 in this way to private owners of waste land. In Austria, since 1852, a forest law, which exercises a strict supervision over the forests, both public and private, has been in existence, and no one is allowed to devastate a forest to the detriment of adjoining holders of land, and cleared or cut forest must be replanted within five years.

In Italy the effort is constant to increase the amount of wooded lands, and the government contributes three-fifths of the cost of reforestation, upon condition that the work is done according to its plan and instructions. In Switzerland the national government contributes from 30 to 70 per cent of the establishment of new forests, and from 20 to 50 per cent for the planting of protected forests, and the law is very strict in regard to cutting.

France is also deeply interested in public forest property. The forests belong largely to communities and public institutions, as well as to the state, and they are controlled in a manner similar to the regulation of forests in Germany. Here, as well as there, no clearing is allowed except by consent of the forest administration.

In all these countries the strictest attention is paid to the subject of forestry, and schools are everywhere maintained for the purpose of instructing men in this work. Russia has been the only nation where forests have been until lately under no restriction, but since 1888 even this country has had its forest laws, and offers loans on favorable terms for the protection and increase of the forests. Hardly any European nationality is without its state control of the forests or without the training schools in which men are instructed how to take care of them.

They are trying in Europe in every way possible to save the forests, and in the United States efforts are now being made in nearly every commonwealth to regulate and control the wooded lands, but our people are not ready to accept the stringent measures which have been empioyed as a necessity for preservation.

THE BUILDING THAT IS TO BE.

DESCRIPTION OF THE STRUCTURE DESIGNED FOR THE SITE AT SEVENTH AND MISSION STREETS.

THE acting Supervising Architect of the Treasury has at last secured the approval of the plans for the proposed new postoffice building for San Francisco. The following is the official description of the building as furnished to the *Examiner* by Mr. Hamilton, the Civil Engineer, who has charge of the drafting room of the Supervising Architect's office.

The main dimensions of the building will be 250 by 215 feet, a height of 70 feet in the main, 90 feet at the main entrance, which will be on Seventh street. This main entrance will project 20 feet from the main building and there will be pavilions on the corners and in the center of the other facades 12½ feet each, making dimensions for Seventh street to the rear 270 feet, and from Mission to Stevenson street 240 feet. The building is to be three stories in height in the main and five stories over the center pavilion on Seventh street.

IN RENAISSANCE STYLE.

The design is what is known as Renaissance, with pavilions on each corner and in centers of facades. The main entrance will be fifty feet wide, divided into three arched doorways. The other entrances will be forty feet wide and will also have three arched doorways with carved pediments over them and in the rear, with tympanums of appropriate designs. The pavilion in the center of each facade will be flanked with columns and pilasters, and the whole building will be crowned with a balustrade. There will be a group of statuary over each center pavilion. The building will be constructed of either granite or marble, which has not yet been determined.

The first story will be set apart for the use of the San Francisco Postoffice. In the center will be a clear space 200 feet square for the use of carriers and other employees engageed in the reception and distribution of mails, and in alcoves there will be rooms for the Postmaster, Assistant Postmaster, and money order and registry offices. This story will be eighteen feet in height.

In the second story there will be three rooms set apart for United States Courts, one each for the Circuit Court, District Court and Federal Court of Appeals. These rooms will by 50x30 feet in size. On this floor there will also be rooms for judges, attorneys and other officials of the courts, jury-rooms and library. This story will be fifteen feet in height.

The third story has been designed with a view of accommodating the Railway Mail Service, Signal Service and Pension Agent. There will be rooms for railway mail clerks, Superintendent of Railway Mail Service, Postoffice Inspectors, a dormitory for mail clerks when off duty, offices of the Signal Service, United States Pension Agent and his clerks and miscellaneous offices for Federal officials. This story, as well as the fourth and fifth, will be thirteen feet in height. In the basement will be located machinery for operating the heating and ventilating apparatus. Here will also be a large space for storage.

PLENTY OF LIGHT.

It is proposed to have plenty of light and ventilation for people employed in the building. All corridors above the first floor will look out upon a court 153x120 feet. This

court will leave a clear space above the postal clerks employed on the first floor, so that there will be no lack of natural light at any time. The ventilating apparatus will also be of the latest improved kind, and there will be four ventilating flues to carry off foul air.

The offices on all floors above the basement will open upon the street. Thus each will be will supplied with light and air. There will be four elevators, two each at the Seventh-street and Mission street entrances. A peculiar feature of ll postoffice buildings recently planned is that lookout stations are provided on top of the postoffice safes which are to be built on the first floor. Inspector will have entry by a circular shaft in the basement, which by means of a spiral stairway will enable them to mount to the top of those safes located in different parts of the floor and overlook all the operations of the postal clerks.

ONE MORE MOVE.

The House Committee on Appropriations wrestled for some time to-day with the San Francisco public-building imbroglio. Representives Loud and Maguire were present at the request of the committee and the question was discussed in all its phases. After quite a lengthy wrangle the committee reached a decision. There will be added to the appropriation already available for the building only $50,000, instead of $150,000, as Secretary Carlisle first recommended. This appropriation will be incorporated in the Sundry Civil bill. There will also be further delay in begining work, on account of the decision of the committee that an investigation must be made to determine whether it is safe to erect on the site selected.

The first surprise at to-day's meeting came when it was announced that Secretary Carlisle has revised his first estimate for the appropriation, and requested of the Appropriations Committee only $50,000 in addition to about $190,000 left over from the purchase of the site. When this matter was brought up before the committee, both Representatives Maguire and Loud vigorously protested against this small appropriation for beginning so large a building, but Chairman Sayers was firm, and refused to allow any more than the Treasury Department had requested. Then the San Francisco Representatives conceded that it was a wise course that this appropriation be made a contingent one, and only available after thorough examination of the site has been by United States Army Engineers.

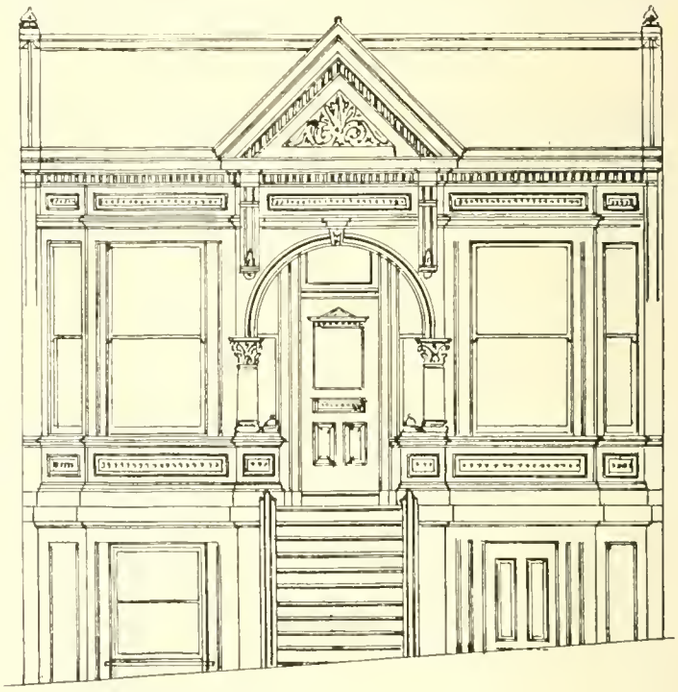
A CASTLE ON TWIN PEAKS.

F. AVERY McCarthy, secretary of the Stanford Addition Land Company, is authority for the statement that a rich English friend is negotiating for the purchase of the Twin Peaks and about thirty-five acres of the adjoining land for the purpose of erecting a handsome residence, built after the style of the old English baronial castles. The site is a perfect one for such a purpose, as it commands a view which cannot be equaled in variety and extent. From the rugged outlines of Marin County to far down among the San Mateo hills, and from the horizon out on the ocean to the mountains back of Oakland, there is nothing which does not come within view from the Twin Peaks.

Perched upon the top of the peaks a large building such as would be put there would stand like a sentinel over Market street, for that thoroughfare would lead right up to its doorstep should it ever be carried out so far. Senator Stanford at one time signified an intention of securing the property for the city, to be used as a public park, but it was sold to others and finally came into the hands of Mr. McCarthy's family.—*Call.*

BOOKS AND PERIODICALS.

MODERN OPERA HOUSES AND THEATRES. Examples selected from playhouses recently erected in Europe, with a short descriptive text and a treatise on theatre planning and construction, with supplements on stage machinery,



FRONT ELEVATION.

theatre fires and protective legislation. By Edwin O. Sachs, Architect, F. S. S., and Ernest A. E. Woodrow, Architect, A. R. I. B. A. Preparing for publication. Illustrated by a Series of 220 plates, reproduced in the best manner by Photo-lithography, from line drawings specially prepared for the Work, and some hundreds of diagrams in the text, reproduced from original working drawings, with all plans and sections drawn to a uniform scale.

The work will be in three volumes, size 23 by 16 inches (58 by 40 cm.), strongly and suitably bound in buckram.

Upon publication the price of the work will be £15 15*s.*, but for the *Subscribers, on whose support the issue entirely depends, the charge will be £9 9s. net.* Half the subscription price will be payable on the issue of the first volume, and the remainder on the completion of the work. A List of Subscribers will be printed in each volume. The first 150 Subscribers will receive numbered copies with a distinguishing title page.

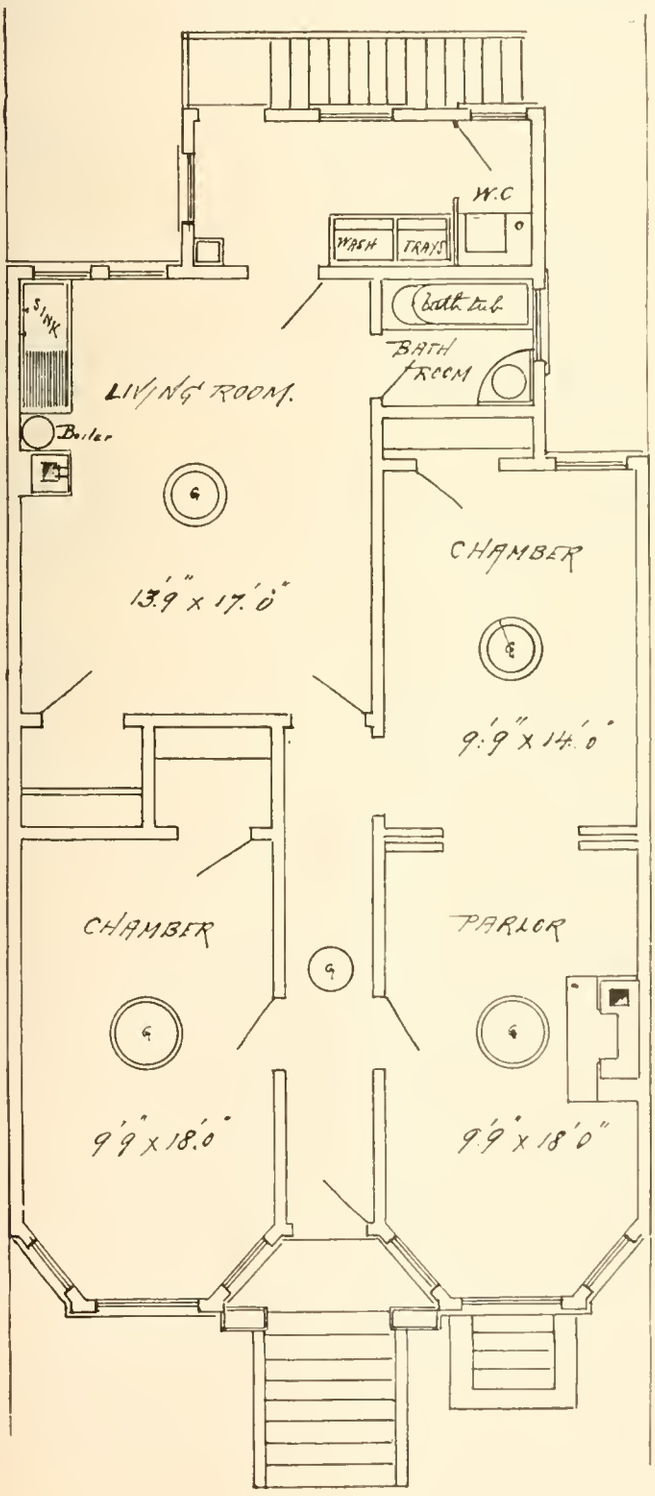
LIPPINCOTT'S MAGAZINE for April, 1895. The complete novel in the April issue of Lippincott's is "Alain of Halfdene," by Anna Robeson Brown. It is a stirring tale of the sea, pirates, rescuers and Mt. Desert (then by no

means so well known as now), in the days when Washington was President.

"At the Hop-Pole Inn," by Mrs. Poultney Bigelow, tells how curiously a nearsighted Englishman and his young wife were reconciled after a first quarrel. "The Defendant Speaks" to some purpose in a story by Genie H. Rosenfeld; result, a divorce is avoided.

Mary Dawson relates the innocent loves of a dancer, 'The Butterfly," and her young man. Marjorie Richardson shows how the young woman who occupied "The House with the Paint Worn off" procured its external rehabilitation.

THE ENGINEERING REVIEW edited by J. Stevens Jeans, London, England, can be truly called the "Epitome of the World's Current Literature". The American agency of this ably conducted monthly magazine is at 12 Cortlandt street, New York, conducted by Messrs. Spon & Chamberlain. American subscription $1.75 per annum.



An illustrated description of a visit to the works of Messrs. Charles Cammell & Co., Limited, Sheffield, England, gives a very vivid account of these immense works for the manufacture of steel and iron as well as the various application of these metals in the way of heavy ordnance, forged cylinders, steel nails, armor plates, etc.

The late Mr. Charles Cammell was the founder of this company in 1837, who in partnership with Mr. Thomas Johnson commenced as steel and file manufacturers and merchants. The demand for their steel proved so great that from time to time enlargements in their works have been made, until at the present time it includes mines of coal and iron ore, and every appliance of turning out the immense production full tables of which will be found in this very interesting article.

We were pleased to notice that the editor gives many notices of recent works of engineering in this country. The article entitled "Recent Progress of Electrical Engineering" by Major T. Flood Page will be read with interest by the Electric Engineers of this country.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

TENANT'S REMEDY FOR BREACH OF AGREEMENT BY LANDLORD.—Where a landlord agreed to make improvements for the benefit of the tenant, his failure to make them does not relieve the tenant in possession from liability to pay rent. And, in such case the tenant is entitled to damages, the measure of which is the difference between the rental value of the premises without the improvements and their rental value with the improvements.

Long v. Gieriet, Supreme Court of Minnesota, 59 N. W. Rep. 194.

ACTION FOR BALANCE ON CONTRACT FOR WORK AND LABOR.—Where no time is fixed for the completion of work under a contract in an action thereon for a balance due, the party for whom the work is being done is not entitled to credit for wages voluntarily paid, in the absence of the contractor to another, to do part of the work he had contracted to do.

Wagner v. Jennings, Court of Civil Appeals of Texas, 27 S. W. Rep. 888.

EFFECT OF DESTRUCTION OF BUILDING AS TO MECHANICS' LEIN.—Under the statutes, giving a contractor who performs labor or furnishes materials in the construction of a building "a lien thereupon, and upon the interest of the owner of such building in and to the land on which the same is situated," and extending the right to subcontractors, neither a contractor nor a subcontractor has any lien for materials or labor when the building is destroyed before completion.

Goodman v. Baerlocher, Supreme Court of Wisconsin, 60 N. W. Rep. 415.

RIGHT TO MECHANICS' LIEN ON THEATRICAL SCENERY.—Scenery and other articles constituting the stage and scenic outfit of an opera house are part and parcel of the edifice, as such, they being essential to the completeness of a building of that class. This being so, the furnishing of such outfit, or of the materials composing same, is furnishing materials for the improvement of real estate; and the person by whom said furnishing is done is entitled to a lien upon the opera house and premises, under the provisions of the statutes giving mechanic liens.

Waycross Opera House Co. v. Soseman, Supreme Court of Ga., 20 S. E. Rep. 252.

LIABILITY FOR DANGEROUS PREMISES.—By contract with an elevator company a party agreed to put fire extinguishers in its elevator. The elevator company was to furnish the staging for the men employed to put in the apparatus. One of these men while at work was killed by a fall caused by a defective plank in the staging. The evidence showed that there was a knot in the plank, and the deceased could not possible have seen it, by reason of the darkness. It was held by the Supreme Court of Wisconsin, that the workman was not guilty of contributory negligence, and that the elevator company was liable by reason of its contract to put in the staging, although the contract was not made with him.

Bright v. Barnett & Record Co. 60 N. W. Reporter, 418.

BUSINESS MOSAICS.

What house is complete without some decoration? Samuel Kellett manufacturer of plaster decorations, plastering repaired and whitened. 28 Ellis street, San Francisco; 375 Twelfth street, Oakland.

"Were you ever up before me?" asked a Police Judge. "Shure I don't know, yer anner. What time does yer anner get up?"—*Boston Commercial Bulletin.*

W. H. Wickersham, as we have had occasion previously to remark is a Building Contractor at 1125 York street, San Francisco, whom if you once employ, is sure to give such satisfaction that he is again called for when more work in his line is wanted, this we consider the highest kind of recommendation.

"Why do you punch that hole in my ticket?" asked a little man of the railroad conductor. "So you can pass through," was the reply.—*Boston Commercial Bulletin.*

If you need water only when the wind blows; if you are satisfied to utilize but a small fraction of the water in your well; if you prefer heavy bills for repairs after each storm in winter, by all means use a windmill; but if you want water at any time, and up to the full capacity of your well, put in the Ajax Coal Oil Gas Engine, the latest thing in mechanics, an engine that uses common coal oil for fuel, and is built by the well known firm of Palmer & Rey, San Francisco, Cal.

Labor AGITATOR—"Every man is the architect of his own fortune." MURPHY (from the rear of the hall)—"Yis, that's so, but he stands a mighty poor chance when he has nothing but a shovel or hod to draw his plans wid."—*Ex.*

Architectural and Ornamental Iron Work. Stable fixtures, hay racks, feed boxes, stable guards, harness fixtures, etc. Now that horses are so cheap is a good time to fix over your stable; of late years much attention has been paid to having the horse housed in a proper manner, and if the rage continues the stable is likely to out do the parlor, unless the madam put her foot down. 135-145 Fremont street, San Francisco, is the headquarters of the Vulcan Iron Works.

"Highstep seems very blue since Miss Coins threw him over." "Yes; he's heartbroken to think what an excellent husband she has missed."—*Chicago Inter-Ocean.*

Miss PEART—"Do you think one is liable to catch anything from kissing?" MRS. PLACID—"That's the way I caught my husband."—*Ex.*

Clawson's Patent Chimney's generally considered the most complete and safest in the market, can be found at 1340 Market street, San Francisco.

"Here's a lovely cigar I picked out for you." "Thanks, but give me one you bought for yourself."—*Humoristische Blatter.*

Wm. Bateman manufacturer of wood mantles, interior finish, inlaid floors, banks, offices, stores and steamboats fitted up. If in want of any of this kind of work you have only to call upon Mr. Bateman at 411 Mission street, who will soon convince you that your wants can be supplied at his establishment.

The antique Roman who fell on his sword made a much better historical figure than the modern militiaman who tripped with the same weapon twisted between his legs.—*Puck.*

Proper Lubricant for Cycle Chains.—It is conceded by all wheelmen that some lubricant is needed to prevent wear of chain and sprocket wheel; such a lubricant not only prevents wear but very largely increases speed and ease of driving. Oil or grease, while useful for the moment, catches and holds dust and dirt. After much experimenting it has been found that graphite makes the most perfect lubricant, when the right kind is used and properly prepared.

The word graphite, like the word charity, covers a multitude of sins. Under the name graphite lubricant are found compounds of cheap black-lead, stove polish, foundry facings, soapstone, etc. Safety in buying, and the surety of getting the best graphite lubricant made, lie in purchasing of a firm of world wide reputation and long experience. Such a firm is the Joseph Dixon Crucible Company, of Jersey City, N. J.

He—"Oh, yes, when I was in London I was enthusiastically received in Court circles." SHE—"What was the charge against you?"—*Pick-me-up.*

Tin Roofers on the Coast will be glad to notice by our columns in the present issue that the old house of N. & G. Taylor Co., Tinplate Manufacturers, Philadelphia, now carry a large stock of their world wide celebrated brand of

Roofing Tin, The Taylor "Old Style" at San Jose, in charge of the well-known house of Messrs. John Stock Sons. This firm announce that they are now ready to supply all dealers and consumers, with either prices, samples or general information as to the merits of the goods.

The Taylor "Old Style" has been largely used in the past throughout California, and also in Oregon and Washington. It is now being used on the Grand Central Station on the Northern Pacific R. R. at Portland. It is handled for the North West as a distributing point by Messrs. Goldsmith & Loewenberg, Portland, Oregon. Thousands upon thousands of buildings all over the United States are lasting testimonials of the worth and great durability of this, the original and genuine "Old Style" brand of Roofing Tin, its many imitations have made the "Genuine" almost a household word among the roofing fraternity. To our readers it should be borne in mind that it is made in the same way as Roofing Tin was first made in 1830, over 65 years ago, in Philadelphia, and then handled by Messrs. N. & G. Taylor Co., and as the firm states, "There are roofs East covered with this brand of Tin that are just as good to-day as when first put on nearly 70 year ago." The wear is certainly the true test of value.

Architects in naming the brand in their specifications can run no risk of substitutes or "just as good". The brand can be obtained quickly from Messrs Jno. Stock & Sons, each sheet is stamped with the name of the brand, the thickness, and the name of N. & G. Taylor Co. who warrant the tin, and it is the only tin on the market that is warranted in the sense demanded by the user. We compliment the Messrs. Taylor on the step they have taken, and congratulate Roofers on the advantage they thus secure.

CITY BUILDING NEWS.

ALAMEDA FREE LIBRARY READING ROOM.

Baker near Greenwich. To build; owner, Mrs. T. M. Sheilds; contractor, Jacob Schuler; signed, April 5; filed, April 8; cost $2200.

Beaver street, No. 15. Additions; owner, Mrs. F. Loth; contractor, C. Eriksen; signed, March 23, filed, April 3; cost $2000.

Butchers Reservation, lot 3, block 22. Cold storageplant; owner, Henry Miller; architect, H. F. Spencer; contractor, Cyclops Iron Works and Gurney Refrigator Co.; signed, March 29; filed, April 3; cost $22,000.

Broadway near Stockton. Mason and terra cotta work; owner, V. Pucinelli; architect, E. Depierre; contractor, P. A. Anotonelli; signed, March 14; filed, March 14; cost $2750.

California and Montgomery. Steam heating; owner, Cal. Safe Deposit and Trust Co.; architect, H. A. Shulze; contractor, P. Leprohon; signed, March 6; filed, March 15; cost $4235.

California and Montgomery. Electric Lighting, etc.; owner, Cal. Safe Deposit and Trust Co.; architect, H. A. Schulze; contractors, Will & Finck Co.; signed, March 6; filed, March 15; cost 3592.

California and Montgomery. Plumbing, gas fitting, etc.; owner, Cal. Safe Deposit and Trust Co.; architect, H. A. Schulze; contractor, James Duffey; signed, March 6; filed, March 15; cost $16,951.

California and Montgomery. Carpenter work and the addition of two stories; owner, Cal. Safe Deposit and Trust Co.; architect, H. A. Schulze; contractor, Thomas Day & Sons; signed, March 6; filed, March 15; cost $95,100.

California and Jones. Ornamental Iron Work; owner, Nob Hill Development Co.; architects, Bugbee & Gash; contractor, D. Jordan; signed, March 18; filed, April 4; cost $4550.

California and Jones. Anchors beams, etc.; owner, Nob Hill Development Co.; architects, Bugbee & Gash; contractor, Dennis Jordan; signed, March 18; filed, March 19; cost $20,600.

California and Jones. Plumbing, gas fitting, etc.; owner, Nob Hill Development Co.; architects, Bugbee & Gash; sub-contractor, J. Doherty; signed, March 13; filed, March 20; cost $10,990.

California and Jones. Electric Elevators; owner, Nob Hill Development Co.; architects, Bugbee & Gash; contractor, Frank A. Hall; signed, March 18; filed, April 4; cost $7,000.

California near Heyman. To build; owner, Mr. Lindberg; contractor, J. Gillogley; cost $1600.

Castro near 19th. Two flats and coal yard, except plumbing; owner, Edward Ring; contractor, Thomas McKee; signed, March 3; filed, March 13; cost $2625.

Carl near Stanyan. To build; owner, A. M. Brulscher and wife; architect, J. T. Kidd; contractor, W. A. Muller; signed, April 2; filed, April 3; cost $1400.

Central Ave. near Clay. To build; owner, W. R. Van Alen; architects, McDougall & Son; days work; cost $5000.

Clement street and 4th Ave. Three two-story frame residences; owner, D. F. McGraw; architect, C. F. Robinson; cost $9000.

Clementina near 4th. To build; owner, Chas. Giovanetti; architect, C. R. Wilson; contractors, Cuneo & Cavaglia; signed, April 8; filed, April 8; cost $3750.

Chattanoga near 23d. Alterations and additions; owner, Samuel Hortop; contractor, D. Currie; signed; March 16; filed, March 19; cost $2400.

Clay near East. Driving 316 piles; owner, J. D. Montanya; architects, Percy & Hamilton, contractor, S. F. Bridge Co.; signed March 14; filed, March 15 cost $1218.00.

Church near 21st. To build; owner, R. M. Barry; architects, Mahoney & Ryland; contractor, T. E. Corrigan; signed, March 13; filed, March 19; cost $2595.

Clayton near Frederick. To build; owner, Mary O'Leary; architects, Shea & Shea; contractor, James Mooney; signed, March 12; filed, March 15; cost $2838.

Collins near Pt. Lobos Ave. To build; owner, J. McMahan; contractor, J. D. Barton; cost $1600.

Dolores near 22d. Raising old building and additions; owner, Samuel Mathews, Jr.; contractor, W. P. Smith; signed, March 13; filed, March 18; cost $640.

Duncan near Guerrero. To build; owner, Kate Marron; architect, J. T. Welsh; contractor, T. R. Bassett; signed, April 3; filed, April 8; cost $2750.

Dupont near Francisco. To build; owner, J. Kucich; architects, Salfield & Kohlberg; contractor, John Pecavich; signed, March 19; filed, March 20; cost $2250.

Eddy near Buchanan. To build; owner, Simon H. Bush; contractor, C. W. Depew; cost $5000.

Elizabeth near Noe. Raising building; owner, M. J. Fitzgerald; contractor, Wm. Plant; signed, March 15; filed, March 19; cost $1065.

Elizabeth near Noe. To build; owner, R. P. Thompson; contractor, W. W. Rednell; signed, April 2; filed, April 8; cost $1600.

Fell near Gough. To build; owners, Mrs. Mary F. and George F. Kelly; contractors, Wheeler & Perry; signed, March 27; filed, March 28; cost $4800.

Francis near Mission. To build; owner, James and Delio Rice; contractor, P. H. McKenna; signed, April 1; filed April 1; cost $800.

Folsom near 20th. To build; owner, J. H. Robinson; contractor, H. J. Weiss; signed, March 23; filed, April 2; cost $3313.

Folsom near 21st. To build; owner, Jacob Rohrer; architect, Emil John; contractor, H. T. Grieb; signed, March 28; filed, April 2; cost $2900.

Fourteenth and Howard. Alterations and additions; owner, Maria L. Rerrel; architects, Pissis & Moore; contractor, F. W. Kern; signed, March 19; filed, April 3; cost $6350.

Filbert near Dupont. To build; owner, Pietro Queirolo; contractors, Cuneo & Cavaglia; signed, March 21; filed, March 26; cost $6030.

Fillmore near Washington. Alterations; owner, Mrs. R. Greenfield; contractor, G. G. Gillespie; signed, March 27; filed, March 27; cost $3000.

Fifteenth Ave. near Point Lobos. To build; owner, E. G. Flanders; contractor, W. W. Rednall; signed, March 19; filed, March 23. cost $1350.

Fulton near Baker. To build; owner, Hannah Mahoney; contractor, J. C. Kelly; signed, March 21; filed, March 23; cost $2360.

Fulton near Baker. To build; owner and builder, Thomas Volden; cost $6000.

Franklin and California. To build; owner, Edward Coleman; architect, W. H. Lillie; contractors, Farrell & Bell; signed, March 18; filed, March 19; cost $13,640.

Geary near Leavenworth. To build; owner, Dr. C. D. Cleveland; superintendent, J. W. Blundon; days work; cost $3500.

Green and Taylor. To build; owner, Thomas McCarthy; contractor, A. E. Waller; signed, March 16; filed, March 19; cost $3300.

Grant Ave. and Sutter. Two-story brick; owner, J. W. Tamm; architect, A. J. Barnett; contractor, A. G. Johnson; signed, April 5; filed, April 6; cost $4000.

Hayes and Octavia. Plumbing; owner, Mrs. Reinle; architects, Stone & Cahill; contractor, J. Doherty; cost $960.

Hattie and 17th. To build; owner, Jas. Kelly and wife; architects, McDougall & Son; contractors, Brennan Bros.; signed, March 28; filed, March 28; cost $1740.

Hermann near Steiner. To build; owner, Chas. Huber; architects, Mahoney & Ryland; contractor, Geo. Reichley; signed, March 30; filed, April 3; cost $1990.

Jasper Place near Filbert. To build; owner, A. Calari; architects, Townsend & Wyneken; contractors, Cuneo & Cavaglia; signed, March 21; filed, March 23; cost $1450.

Jessie near 2d. Five-stories and basement, brick; owner, D. Keil; superintendents, Hansbrough Bros.; days work; cost $15,000.

Jessie near 7th. Additions; owner, Michael McNamara; architects, Hatherton & Ross; contractor, J. W. Sandy; signed, March 20; filed, April 3; cost $1250.

Jersey near Noe. To build; owner, Laura H. Wells; architect, Frank Mead; contractor, W. H. Mead; signed, March 27; filed, April 10; cost $1950.

Jones near Chestnut. To build; owners, Mr. and Mrs. David Crowley; contractor, J. W. Pauls; signed, April 6; filed, April 10; cost $3600.

Jones near Post. Berkshire Hotel plumbing; owner, Emily B. Hopkins; architect, J. H. Littlefield; contractor, H. Williamson; signed, March 27; filed, March 28; cost $2750.

Jones near Post. Alterations and repairs; owner, Mrs. Emily B. Hopkins architect, J. H. Littlefield; contractor, D. Currie; signed, March 30; filed, April 1; cost $1200.

Kentucky near Sierra. To build; owner, Catherine Sullivan; architect, A. J. Barnett; contractor, Timothy Sullivan; signed, March 14; filed, March 18; cost $2300.

Laguna near Vallejo. To build; owner, Caroline S. Townsend, architect, W. H. Wharff; contractor, F. W. Maurice; signed, March 14; filed, March 15; cost $11,230.

Laguna near Vallejo. Plumbing and gas-fitting; owner, Caroline S. Townsend architect, W. H. Wharff; contractor G. C. Sweeny; signed, March 28; filed, March 20; cost $1240.

Laguna near Pine. Alterations and additions; owner, Z. Wollberg; architect, H. Geilfuss; contractors, Hood & Watson; cost $1000.

Lafayette Place near Green. To build; owner, G. Cardella and wife Giovanni; contractors, R. Pagano and G. Capelli; signed, March 25; filed, Marth 25; cost $3194.

Liberty near Guerrero. To build; owner, W. J. Patterson; architects, Martens & Coffey; contractor, H. Behrens; signed, March 26; filed, March 28; cost, $2444.

Liberty near Guerrero. Concrete, Grading, etc.; owner, W. J. Patterson; architects, Martens & Coffey; contractor, Cushing Welmore Co.; signed, March 25; filed, March 28; cost $695.

Lyon near Fulton. To build; owner, K. C. Richard; contractor, Wm. Harvard; signed, March 25; filed, March 25; cost $3250.

Market street, No. 1318. Alterations and repairs; owners, Dunn Bros.; architect, I. W. Rowell; contractor, W. H. Hughes; signed, March 16; filed, March 16; cost $1318.

Market and O'Farrell. Alterations to entrance, Phelan Building; owner, Phelan Estate; architect, Wm. Curlett; cost $6300.

Market near 5th. Mason work on Parrott Building; owners, Parrott Estate; architects, Pissis & Moore; contractors, Richardson & Gale; Estimated cost $57,155.

Market near 5th. Cast iron casing for steel columns; owner, Miss Emma Spreckles; architects, Reid Bros.; contractor, Bay City Iron Works; signed, Feb. 26; filed, March 28; cost $1235.

Market near 5th. Marble work; owner, Miss Emma Spreckles; architects, Reid Bros.; contractor, Vermont Marble Co.; filed, March 28; filed, March 28; cost $3600.

Market near 5th. Finishing a bar room; owner, Chas A. Zinkand; architect, Emil John; contractors Fink & Schindler; signed, April 2; filed, April 4; cost $11,240.

Market and 4th. Elevator alterations; owner, Mrs. Flood; contractors, Cahill & Hall; cost about $25,000.

Mason near Green. Six dwellings complete; owner, A. J. Garibaldi; architect, E. Depierre; contractor, Jas. McLean; signed, April 1; filed, April 3; cost $6150.

Mason near Geary. Plumbing, etc.; owner, Hall Association N. S. G. W.; architect, A. C. Lutgens; contractors, Allen & Rooney; signed, March 30; filed, April 2; cost $2790.

McAllister near Baker. To build; owner, Thomas J. Campbell; architect, J. B. Campbell; contractor, James McConahey; signed, March 28; filed, April 12; cost $2700.

Montgomery near Vallejo. To build; owner, G. Capura; architect, E. Depierre; contractor, Jas. McLean; signed, March 9; filed, March 12; cost $2345.

Mission near 7th. To build; owner, O. Nolte; architect, C. M. Rousseau; contractor, R. J. Pavert; signed, March 19; filed, March 21; cost $4000.

Octavia and O'Farrell. To build; owner, Hannah Maurer; architect, E. J. Vogel; contractor, M. J. Savage; signed, April 1; filed, April 2; cost $9140.

Ocean House Road. Excavations and embankment for a race track; owner, Alexander F. Williams; Engineer, M. M. O'Shaughney; contractors, P. Broderick and J. Kelso; estimated cost $25,000.

Pacific Ave. near Jones. To build; owner, John and Annie Wrede; architect, F. B. Wood; contractor, Robert Frost; signed, March 12; filed, March 13; cost $2475.

Presido. Pneumatic Gun Power House; owner, U. S. Government; architects, Percy & Hamilton; contractors, Francoeur & Bowers; cost $4200.

Post near Pierce. To build except plumbing; owner, Wm. Kaiser; architects, Salfield & Kohlberg; contractor, T. R. Bassett; signed, March 12; filed, March 14; cost $5900.

Post near Pierce. Plumbing; owner, Wm. Kaiser; architects, Salfield & Kohlberg; contractor, W. D. Hobro; signed, March 12; filed, March 14; cost $1125.

Polk and Sutter. Plumbing, etc.; owner, M. H. DeYoung; architect, Clinton Day; contractor, E. J. Duffey; signed, March 7; filed, March 27; cost $4000.

Ridley near Valencia. To build; owners, Galland Bros. & Caro; architect, M. J. Lyon; contractor, J. N. Cobura; signed, March 13; filed, March 16; cost $875.

Sacramento near Walnut. To build; owner, Felix Latz; contractor, F. G. Kronnick; signed, March 14; filed, March 14; cost $4000.

Sanchez and 19th. Additions; owners, Mr. and Mrs. Carmile; contractors, Hood & Watson; cost $900.

Second Ave. near Clement. To build; owner, Mrs. Adline Froham; architect, Herman Kraetzer; contractor, B. I. Taylor; signed, March 21; filed, March 25; cost $3500.

Second Ave. near Lake. To build; owner, T. G. Barker; architect, H. J. Kraetzer; contractor, Byron I. Taylor; signed, April 5; filed, April 10; cost $2500.

Seventh Ave. near A. Cottage; owner, J. C. Shea; architects, Shea & Shea; contractor, Jos. Keaney; signed, March 25; filed, March 28; cost $1100.

Shotwell near 24th. To build; owner, Samuel G. Hammond; architect, E. N. Snell; contractor, C. S. Emmons; signed, March 12; filed, March 12; cost $3363.

Sharon near 18th. To build; owner, Mrs. Hulda Heine; contractor, C. V. Bunce; signed, March 16; filed, March 22; cost $1800.

Stockton near Filbert. To build; owner, V. Podesta; architects, Townsend & Wyneken; contractor, G. Massoletti; signed, March 27; filed, March 28; cost $1425.

Steiner near Hayes. Plans and specifications filed; owner, Anna Cornahrens; architect, Henry Geilfuss; contractor, J. H. Munster; signed, April 6; filed, April 8; cost $4196.

Sutter near Central Ave. To build; owner, Miss Rebecca E. Mathews; architect, C. F. Robertson; contractor, Thomas J. Crawford; signed, March 8; filed, March 16; cost $2300.

Sutter near Powell. Alterations to Elsmere House; architect, Wm. Curlett; cost $3000.

Third street No. 44. Painting, glazing, etc.; owners, Hyman Bros. Co.; architects, Percy & Hamilton; contractors, Merchant & Nickles; signed, April 5; filed, April 8; cost $1500.

Turk near Larkin. Additions; owner, Geo. Scott; contractor, G. A. Hunnewell; signed, March 20; filed, March 20; cost $1200.

Turk and Fillmore. Car House; contractor, Wm. A. Butler; cost $28,000.

Twenty-fourth near Bryant. To build; owner, C. H. Dolan; architect, M. J Welsh; contractor, W. G. Hughes; signed, March 16; filed, March 16; cost $1348

Valencia near 16th. To build; owner, W. A. Bahr; architect, Emil John; contractor, F. A. Hellmuth; signed; March 18; filed, March 15; cost $2585.

Valencia and 15th. Excavations, etc.; owner, Rose A. Pickering; architects, Havens & Toepke; contractors, Whittle & Smith; signed, March 16; filed, March 22; cost $1891.

Van Ness Ave. near Vallejo. To build; owner, John Evans; architect, J. P Chadwick; contractors, Wm. Smith & Thomas Rindell; signed, March 15 filed, March 8; cost $3675.

Vallejo near Buchanan. To build; owner, Thomas F. Boyle; architect, J. C. Newsom; contractor, Jas. McLean; signed, March 28; filed, March 30; cost $4647.

Vermont near Nevada. To build; owner, Isaiah Leslie; contractors Holmgren & Westerlund; signed, March 30; filed, April 2; cost $1200.

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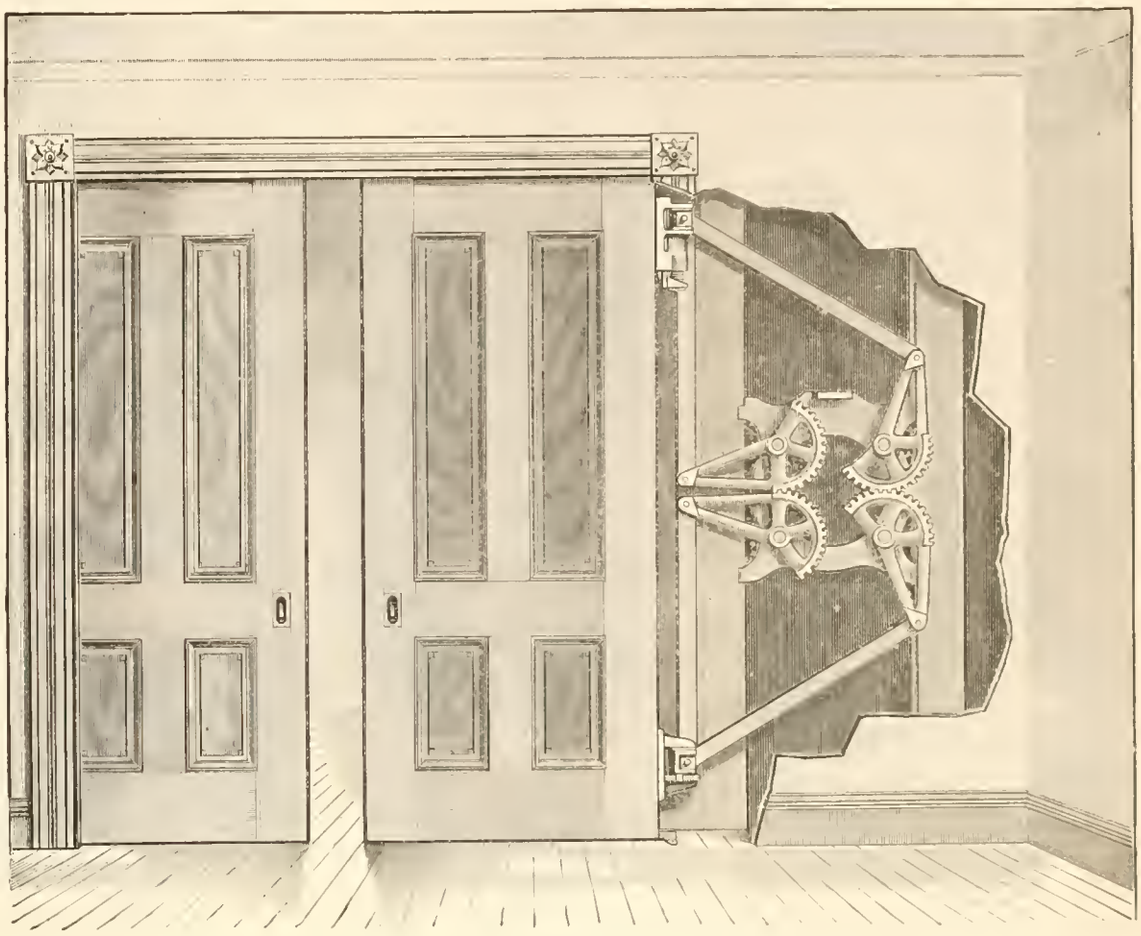

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March 19. John Conlin vs. M. J. Gallagher and Phoebe Lowenthal; Sacramento near Buchanan; $350.

March 19. McInerny and McDonald vs. A. Algren; Nevada near Rhode Island; $125.

April 2. F. W. Krelling Sons Co. vs. Eliza Harrington and J. S. Hoffmeister; Diamond near 25th; $42.

April 6. Paul Carmouche vs. R. F. Mogan; Turk and Scott; $354.

April 9. S. F. Lumber Co. vs. L. C. Levey and J. S. Hofmeister; $585.

April 9. Lippert & Cahn vs. Same; $386.

April 9. S. F. Lumber Co. vs J. H. Rothgeber; Precita near Mission; $400.

April 9. G. Hutchinson vs. Chas. Douglass ank Teresa Murphy; $35.

RELEASE OF LIENS.

April 6. G. W. Glosser to Mary and Fred W. Baker; Hayes near Fillmore; $204.

April 6. G. C. Sweeney to Petterson & Person and Mary and F. W. Baker; Hayes and Fillmore; $625.

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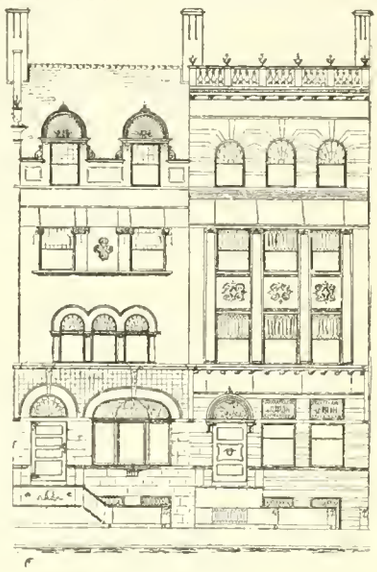

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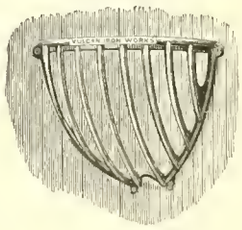

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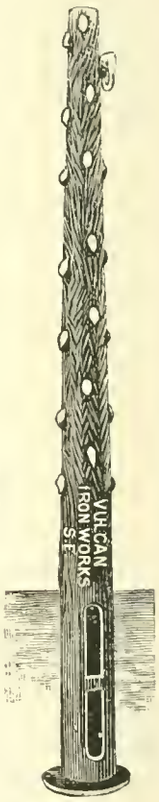

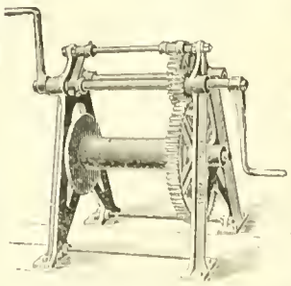

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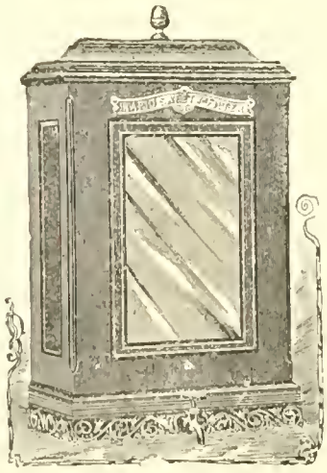

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" " " 1x3, fencing	16 00
" " " 1x4 "	15 00
" " 1x3, 1x4 and 1x6, odd lengths	13 00
" " second quality	11 00
" " selected	20 00
" " clear except for flooring	28 00
" " " for flooring less than flooring	1 00
Clear V. G. No. 1 Flooring, when ordered, extra	5 00
Fire Wood	11 00
Dressed Pine, flooring, No. 1, 1x6	26 00
" " " 1x4	28 00
" " 1¼x4, 1¼x6 and odd sizes	30 00
" " " all sizes, No. 2	21 00
" " Stepping, No. 1	37 50
" " " " 2	27 50
Ship Timber & Pl'd rough selec'd (aver. 40 ft)	24 00
" " selec'd pl'nd, 1 sd (aver. 40 ft)	27 00
" " " " 2 " (aver. 40 ft)	27 50
" " " " 3 " (aver. 40 ft)	28 00
" " " " 4 " (aver. 40 ft)	29 00
Deck Plank, rough (average 35 feet)	32 00
" " dressed (average 35 feet)	37 00
Pickets, rough, B. M	20 00
" ⅜x1½ "—4 ft. long per M	4 00
" ⅜x1½ "—4½ "	4 00
" ⅜x1½ "—5 "	5 25
" ⅜x1½ "—6 "	6 50
" ⅜x1½ "—7 "	8 50
" ⅜x1½ "—8 "	10 50
Furring, 1x2 per lineal ft	0 0¾
Lath, 1½ 4 ft per M	2 50
" 1½ 4 ft "	2 75
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" " ½ inch	27 00
" clear	30 00
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" " selected	21 00
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Dressed " merchantable boards	18 00
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" " No. 2 do	22 00
" " T & G, 1x6, 12x14	25 00
16x20	28 00
" " " 6 to 10 No. 1	23 00
" " " under 6 "	20 00
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" " " " 2	23 00
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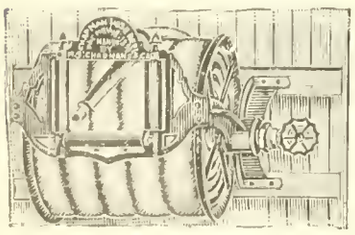

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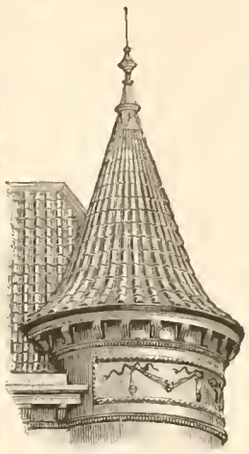

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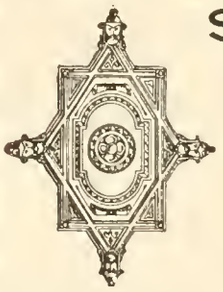

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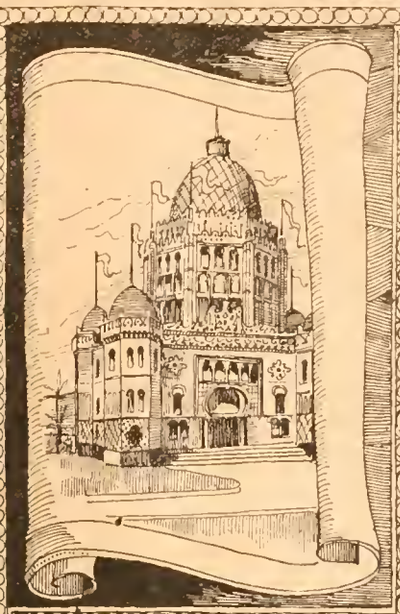

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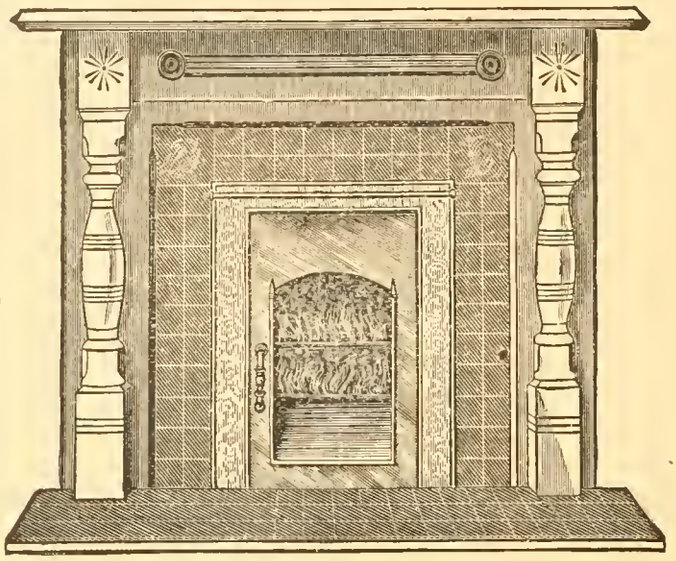

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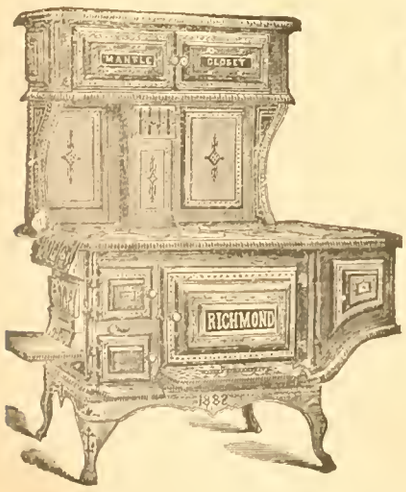

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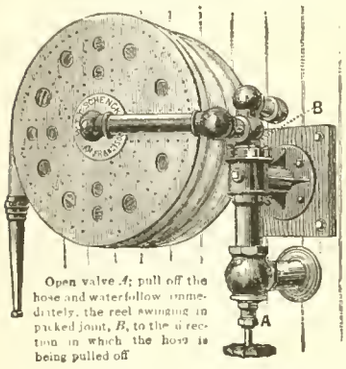

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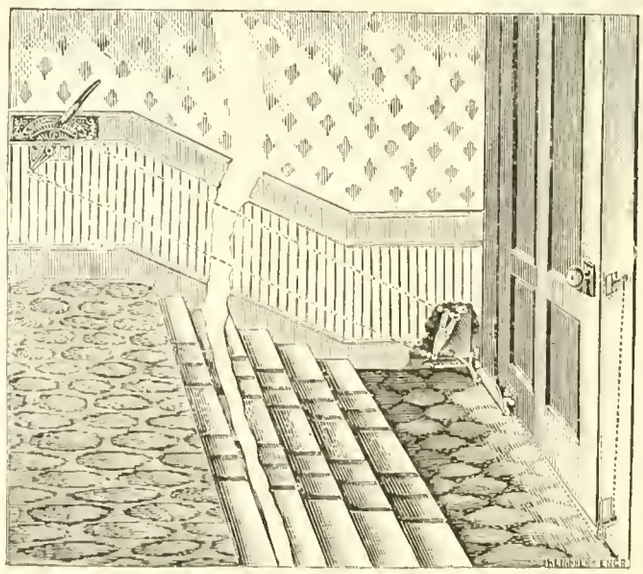

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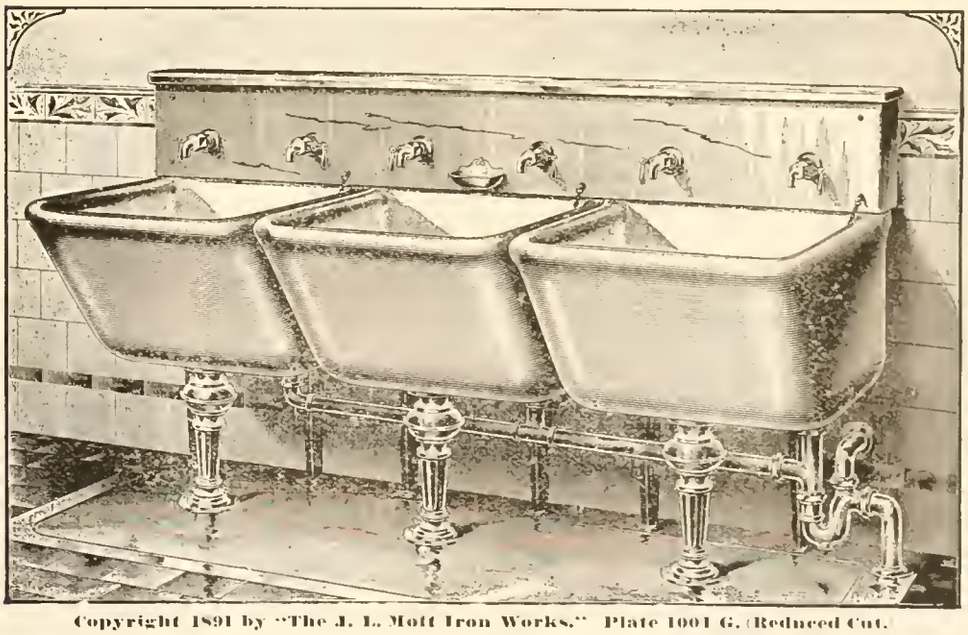

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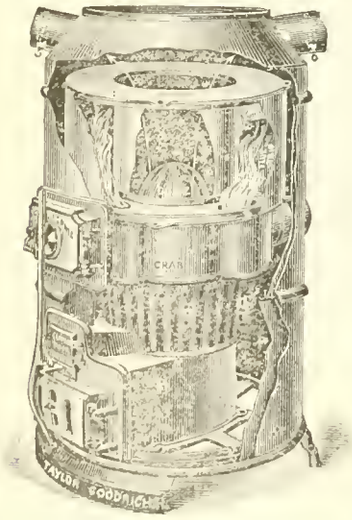

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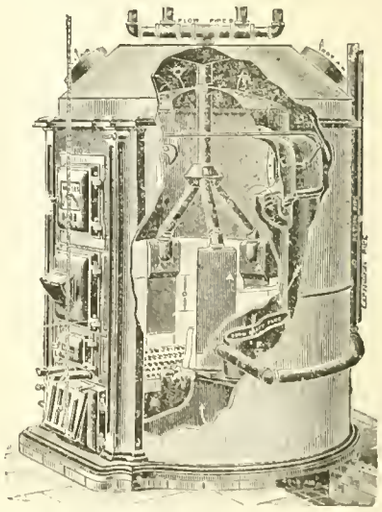

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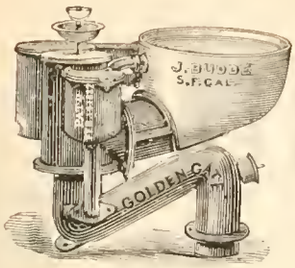

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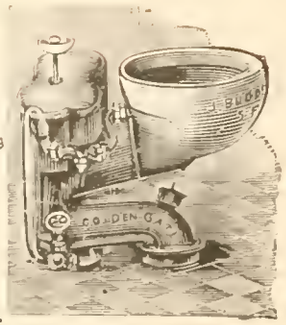

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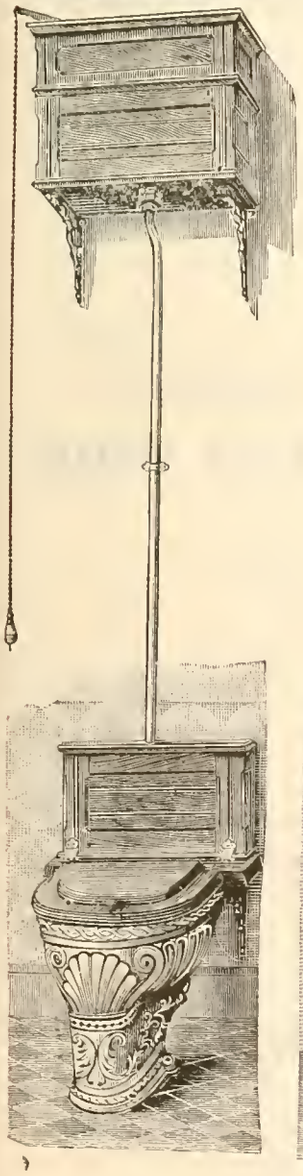

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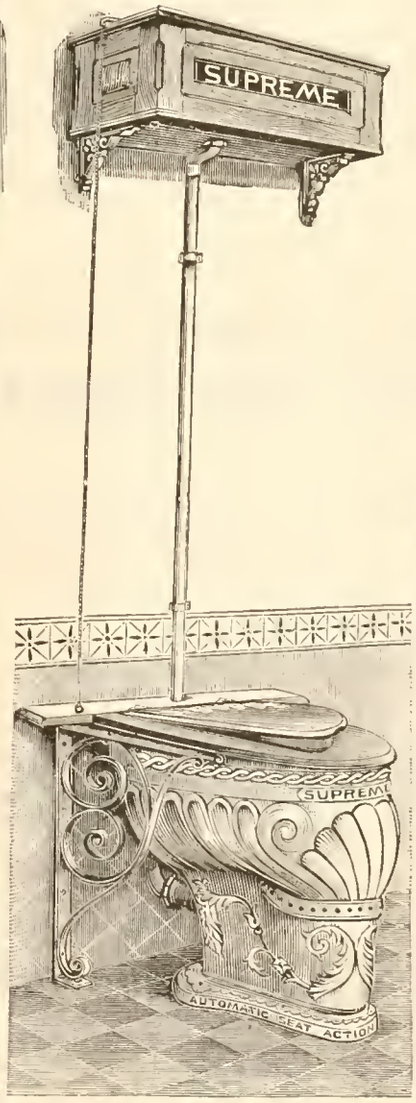

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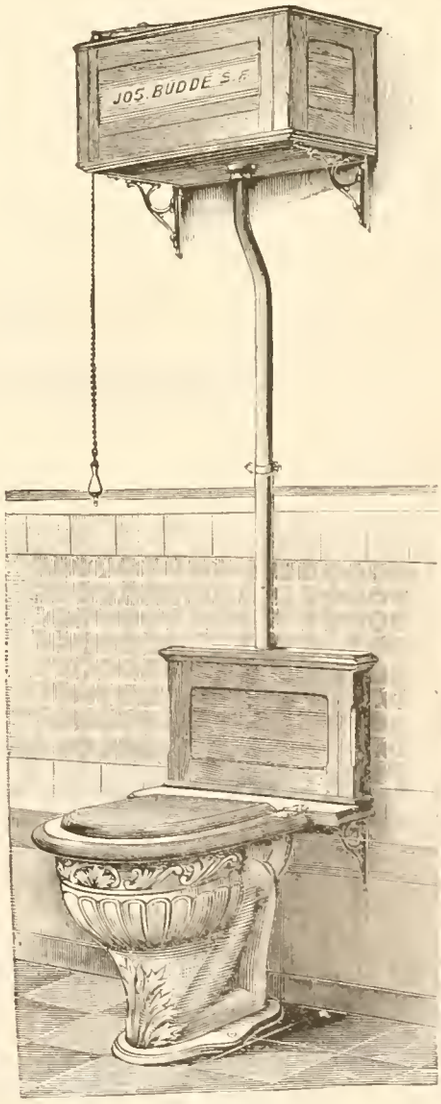

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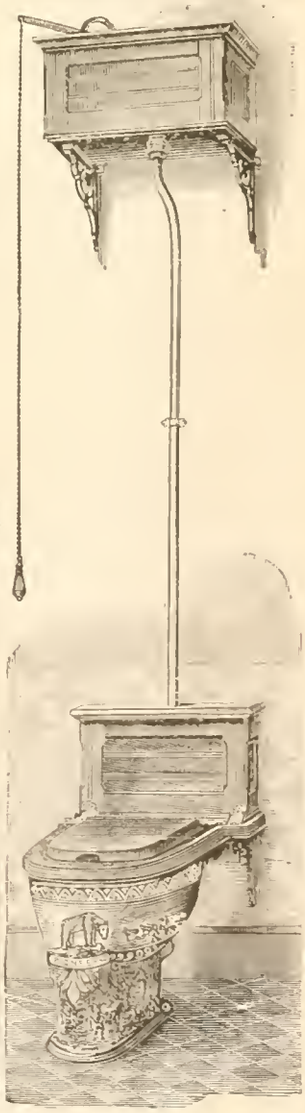

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OF late a great many accusations have been made of inferior workmanship being done in the construction of the foundations destined to carry the superstructure of the new ferry depot, which the State Board of Harbor Commissioners are erecting at the foot of Market street. The daily press have taken the matter up and redoubled the noise made by the accusers, till a disinterested public would be justified in believing it dangerous to even walk across the concrete arches and piers already completed. From the Governor of the State down through the Grand Jury and investigating committees and experts of all kinds, the foundations have been bored and tapped and tested, with the result that the more they are investigated the better they prove to be, and not a single serious charge against the contractors or the engineer in charge has been made to stick. But as a scape-grace must be found, it is now charged that the architect did not make a sufficient number of personal visits of inspection, and our worthy watch-dogs of the treasury will try to avoid any further payment of the architect's commission on that ground.

There is no doubt that the architect would have been held responsible in case the foundations had been found defective; it is a poor rule that will not work both ways; if the architect is responsible for the proper execution of the work, and would be blamed if things went wrong, why in the name of Justice is he not entitled to some credit when praise of the ferry foundations is the order of the day.

WHAT THE STATE OF MASSACHUSETTS HAS DONE IN REGARD TO GOOD ROADS.

STARTING in June, 1892, a Temporary Commission was appointed to examine into the condition of the roads, and to draft a bill providing for the improvement of the highways of the Commonwealth. The law suggested by the Commission was, with some changes, passed in June, 1893, but, before any petitions for construction of State highways were submitted to the General Court, an act was introduced and passed June 20, 1894, increasing the powers of the Commission, and permitting the Selectmen of any town, or the Mayor and Aldermen of any city, as well as County Commissioners, to petition the Highway Commission for taking roads as State highways. In place of submitting to the Legislature a separate bill for the construction of each road, it was voted that the appropriation be used by the Highway Commission, without further legislation, in building State highways.

The $300,000 has been pretty evenly divided among fourteen counties. Before deciding which of the many petitions should be granted an official visit was paid to each locality, and full information as to the value of the proposed improvement collected. While this method has distributed the work in small sections of roads, thus increasing the expense per mile, the advantage to the people at large will be greater, for the reason that each portion of the State highway constructed is intended to be an object lesson to those living near by. County Commissioners and other officials will watch the work as it progresses, and follow out the same lines in building county and other roads which are not intended for State highways.

The plan is to build, section by section, such roads as will connect the great centers of trade, and join with through roads in other States, so that both local and interstate communication will be benefited. Under date of January, 1895, the Massachusetts Highway Commission has rendered a report which covers the work of the past year, and this publication should be consulted by those who are considering legislation.

The provisions of our law will permit contracts for the construction to be let to municipalities or to private corporations, but the former arrangement is preferred, as it is more effectual in teaching the people the art of road building, and protects the State against cheapening the work by the importation of foreign laborers, an element which is apt to be objectionable.

A resident engineer is appointed by the Commission, and it is his duty to be in attendance, and keep a correct account of all items to be paid for by the State.

Wherever the traffic was of sufficient proportions to warrant it the roads have been broadened. The advantage to owners derived from the construction of the way is, as a rule, so much greater than the injury to them by widening the road that, in a large majority of cases, the town officials have been able to procure releases without any cost.

Thirty-eight sections have been contracted for, and only eight of them are to have a width of eighteen feet of hardened surface, all others being fifteen feet wide. As the primary object is to get length of way, the Commissioners are considering the advisability of building single-track roads in the thinly-settled districts. These would not be over nine feet wide, with here and there portions of double width as convenient passing points for carriages. A mile and a half of such roads can be built for less than the cost of a mile of fifteen feet width, and the advantage in getting produce to market is not lessened, provided such construction is confined to localities where the average traffic is from six to eight vehicles an hour.

There is need of legislation to regulate the care of, and responsibility for, sidewalks on State highways. These being of purely local advantage should be under the supervision of the town, the wheelways alone being constructed and kept in order by the State.

Progress has been made in the laboratory work on the road building stones of the State. Experiments of this kind are carried on at Harvard University in the Lawrence Scientific School, whose dean, Prof. N. S. Shaler, is a member of the Highway Commission. The chief aim of these inquiries has been to determine the qualities which constitute fitness for road making. This will be of value to the Commission in enabling them to utilize the road material near at hand, and thus lessen the cost of construction. As this phase of the work progresses maps are made showing the location of all deposits suitable for road building.

A number of towns have already appropriated money to build their streets in the same careful manner as those constructed by the State, and others have purchased road machinery with the intention of extending the work on roads other than State highways.

Careful consideration has been given to the plan of planting shade trees along the highways. With this end in view, experts have been consulted concerning the best varieties for the purpose, and the wayside trees have been examined, so as to determine the species well adapted to the climate and soil of Massachusetts.

As the estimated expense of procuring and planting these trees is not less than one-half a million dollars, the Commission has rightly made this question secondary to road building, but in the meantime they are collecting such data as will enable them to work with profit on the adornment of the roads after the construction is well in hand. The American and English elms have the advantage of fairly rapid growth, with shade high above ground, and the leaves falling from them give but little obstruction to the gutters. They have the disadvantage of being subject to the attacks of insects, so that the cost of protecting them from these pests would be considerable. Maples grow well and are beautiful, though they often shade the road too much. It is the custom in parts of Europe to plant the road-sides with trees which yield profitable crops. In France and Germany, for example, cherry trees abound. In these countries the yield of the wayside trees belongs to the neighboring land owners, but in some cases to the community, and their product is well guarded by law. There will be more or less experimenting on the part of the Commission before they decide upon the species to be planted. The law provides for the beginning of this work in the Spring of 1895, and from that time it will be carried on slowly, so as to give us the benefit of experience.

Every State should make a beginning on road improvement. In thinly settled regions of the country, where the people do not feel able to undertake much, they can do no better than to start the reform by constructing sections of single-track roads. No community can afford to neglect the common roadways. Our prosperity is too intimately connected with the facilities for communication.

I have spent many thousands of dollars in inaugurating

and advancing this reform, and continue to take an active part in it, though for a long time I have not addressed you on the subject.

The interest is now general, and the leaders numerous, consequently there is a demand for road news, more especially for the recent advancements in the line of actual experience. ALBERT A. POPE.

GLASGOW—A MODEL MUNICIPALITY.

TO the thoughtful mind, nothing is more interesting or a more hopeful sign of the times than the growing interest which we in Great Britain are learning to take in questions of municipal government. Sixty years ago representative municipal government, in the sense that we attach to the word to-day, was a thing unknown. The towns were then in the hands of the old close corporations. The representive principle only received final sanction in 1833, in Scotland; two years later, in England. It has grown up with the Victorian era, nor is it the least of the important developments that have done the same. Perhaps a cynic might find significance in the fact that the real importance of Parliament as an administrative body has been steadily decreasing during the same period. The House of Commons has been more and more given up to the demons of speech, irrepressible and leading nowhither, until in this present year of grace men are learning to look to the remarkable renascence of municipal spirit as the most likely source of the reforms that are needed to adjust the conditions of modern life to modern people. Even London, whose inherited *inertia* has combined with her proximity to the central authority of the Empire to make her neglect her own salvation, has at last awakened to the desirability of good self-government, and the consequence is that her inhabitants have, some of them at least, ceased to ask, with disdainful scorn, whether any good thing could come out of Nazareth or Sunderland. They are not unwilling to take counsel from the experience of Berlin and Paris, even of Manchester and Glasgow. The whole change that has come over the public mind in this respect in the last twenty years is admirably expressed in a recent speech of Mr. Chamberlain, who has himself contributed to it in no small degree. "Now," he said, "people are beginning to appreciate the fact that municipal government is the most potent agent of social reform, and that it is the best instrument by which the wealth and the influence and the ability of the whole community can be concentrated and brought to bear in order to relieve the pressing wants of its least fortunate members, and in order to raise the general level and standard of the whole population." There are many towns to-day from which this definition might be illustrated. Manchester and Birmingham and Bradford are all keen at the work. But Glasgow, whom her citizens delight to call the second city of the Empire, assuredly deserves the name of first, both in regard to the chronology of modern municipal development and to the success with which she has executed all her designs. Glasgow was on the crest of the wave of reform which began to gather in the cities of the United Kingdom about the middle of the century, and she has many lessons to-day to teach even her most advanced sisters. Some of these I am now to sketch, with the apologies for the necessary limitation of my canvas.

The municipal policy of Glasgow for the last fifty years may be defined in words used by her present Lord Provost, Mr. James Bell, who is himself an epitome of the social enthusiasm, the business capacity and the enterprise that distinguish the city over which he rules. It is, in brief, to attempt to make the life of the citizens as healthy and as happy as is possible. The Corporation recognise three duties as being lain upon them: to fulfil their trust by economical administration of the city's finances; to improve public health, both physical and moral; and to give brightness and the possibility of happiness to civic life. There are few residents in Glasgow to-day who are unwilling to admit that this rather ambitious programme has been carried out to the full. Good financial management is placed first partly because the Glasglow town council is composed of business men who apply the lessons of their practical life to their municipal work; partly because (to quote the Lord Provost again) their duty "is to the whole body of the citizens rather than to individuals, and low rating is the most widespread of boons." The result is that the well-to-do Glasgow householder enjoys his manifold advantages for a rate of little more than half-a-crown, while his poorer brother is still more lightly taxed. Beyond that, the Glasgow Corporation hold it their duty to undertake the supply of those necessaries of life—light, fresh air and pure water—which private enterprise cannot generally be trusted to provide. Further, they attend to the prevention and cure of the moral and physical diseases that always threaten a large community. They prefer prevention to cure, and therefore they endeavour to give everybody a chance of owning a clean and decent home, with fresh air, sunlight, and opportunities of recreation for himself and his children. Parks and picture galleries, recreation grounds and concerts are supplied by them on a sound commercial basis. "The power of the multiplied penny" is very thoroughly understood in Glasgow, where Councillors are accustomed to boast that for an infinitesimal fraction in the rates they can give their constitutents parks and picture galleries that no millionaire could afford to own so near the heart of a town. Indeed, if the chancellor Oxenstiern had known Glasgow to-day, he would probably have instructed his son to go and see with how little expense and how little fuss the world could be governed, and so have deprived the leader writer of one of his favourite *cliches*.

As in case of most governing bodies which have come into being by evolution, not by creation, the functions of the Glasgow Corporation are distributed in a somewhat arbitrary manner. The seventy-seven gentlemen who compose the Council meet now as one body, now as another, for the discharge of various duties. This Protens-like transformation is a relic of the past that might be spared. But there is no difference in the constitution of the various ruling bodies, and the Council is really one and indivisible for all its functions. The administration of the city's property is in the hands of the Town Council, as also that of certain minor trusts chiefly educational. Next come the trusts of greater importance which are in the hands of the Magistrates and Council of the City of Glasgow. Thus we have the City Improvement Trust, the Markets Trust, and the Water Trust. The supply of gas and electric light, the parks and picture galleries, the public baths and wash-houses, and the tramways are also managed by the Town Council. That body controls in addition the Michell

Library, a collection of upwards of 100,000 volumes, which Glasgow owes to private generosity. Persevering attempts are being made to get the Free Libraries Act adopted, but it is one of the few blots upon the fame of the city that they have not yet been successful.

The Corporation adopts the name of the Police Commission in order to discharge some of the most important of its duties. Indeed, it may be said that the Town Council might perhaps be spared, but the Police Commission never could. It has also been said that that the one corresponds to the spiritual power, the other to the secular arm; but it is not well to push the metaphor too far. The name of the Police Commission recalls the old Scottish connection with France and the once universal Roman law. It must be taken in the wider significance of the Greek *politeia*, rather than in the narrower sense which England attaches to the word. The duties of the Police Commission of Glasgow include the work of the policeman proper, of the lamplighter and the fireman—watching and lighting, in short; further, the whole of the very important sanitary department, the repair and cleansing of the streets, and the purification of sewage before it is sent into the Clyde, a work that is as yet only done in part. It has long been contended by certain critics that this distinction between the Council and the Police Commission is wasteful, since it involves the duplication of certain officials, and it is possible that the administration of the city will soon be unified in name, as it has long been in reality. But this is another story.

When an outsider proceeds to look more closely than this Pisgahsight has done into the municipal activities of Glasgow, he finds that both in chronological order and in magnitude the water supply is the first matter that calls for attention. This has long been a text for the sermons of would-be municipal reformers in other towns. The wave of municipal progress that appeared in Great Britain about the middle of the century probably arose from the scare that was caused by frequent outbreaks of cholera and typhus in the large towns. In Glasgow it showed itself in uneasiness about the water supply, which was then derived from the comparatively unpolluted Clyde. Forty years ago this supply was both impure and limited; nasty, though by no means cheap; and the Corporation decided, with some misgivings, to venture on the then unprecedented step of taking water for their city from the beautiful and remantic Loch Katrine, thirty-five miles distant. The domestic water-rate was then 1s. 2d. in the pound. In the course of the first sixteen years years after the introduction of the Loch Katrine water it was reduced to 8d., and for the last four years it has stood at 6d. The necessary raising of the Loch has destroyed the famous Silver Strand· but Glasgow is not so romantic as to think that an offset to the fact that the water, "caught within cloudland, is purity itself." There is practically an unlimited supply for domestic purposes, and in consequence the Corporation are able to rejoice over the fact that Glasgow is said to use more water per head of her population than any town in the kingdom. Only Dublin gets cheaper water, and not even Manchester gets it better.

The finance of the matter, though dry, is practically interesting, since it relates to the first experiment in municipal collectivism that was made on a big scale in this country. One cannot, unfortunately, say of statistics, as Philaminte did of Greek, that with them *on ne peut gater rien*; but on a subject like this the reader must be entreated to pardon a certain sprinkling of figures. The capital outlay on the waterworks up to 1894, then, was nearly two and a half millions sterling. In 1870 a sinking fund was established. Through its agency about three-quarters of a million have been paid off up to the present time. And this sinking fund will pay off the whole of the remaining debt by 1941, when the present waterworks will be the unencumbered property of the Corporation. In the meantime the supply of water has been immensely increased, the quality vastly improved, and the price more than halved. It has been calculated that the aggregate saving to the consumer since 1870 amounts to more than two-thirds of the debt now outstanding. It has, in short, been conclusively proved that municipal management of such a business as the supply of water is compatible with a direct saving of money to the consumer and a great improvement in the supply, while it is impossible even to guess at the economy in life and coin that has been effected by the introduction of the soft, pure, and abundant water of Loch Katrine to the crowded city.

The Water Trust is also about to supply power in the form of water at a pressure of 1,000 lbs. to the square inch, throughout the business area of the city. The hydraulic mains will be extremely useful in case of fire. Further, the selling of power ought to prove another interesting experiment in municipal "business."

Along with water one naturally thinks of gas as another necessary of life. Here, too, the Glasgow Corporation have long held the field. It was no doubt, the marked success of their dealing with the water that encouraged them to assume control of the lighting of the city. In 1869 they took over the production and sale of gas from the two private companies which then performed it. The quantity of gas sold has since more than trebled, while its price has been correspondingly decreased. The total debt on the gas works is still nearly two millions, but one is credibly assured that this formidable sum will be cleared off in twenty-five years from now by the operation of the present sinking fund.

The Corporation have also supplied electric light for the last three years. Many streets are lighted with it, in a rather pleasing fashion, and there are about five hundred private consumers.

But perhaps the most brilliant affair is the undertaking of the tramways. The history of this business is worthy of record. The tramways of Glasgow have hitherto been worked by a private company which had a lease of them for twenty-three years, that expired June 30, 1894. Some six years ago the Council requested the Tramway Company to assent to certain conditions, regulating, amongst other things, the hours of work of the Company's servants. The Company refused point-blank to do anything of the kind. Immediately thereafter it was suggested by some of the more advanced Councillors and their friends—especially by their friends—that the town should take the tramways into its own hands on the expiry of the lease. For some time this proposal was generally treated as "rank Socialism." But it was not long in commending itself to the citizens. As ofter happens, the citizen tail wagged the Corporation dog, and a speedy *volte-face* was made by Councillors who had been most backward in the matter. The Company, confiding in what is fondly considered to be its necessity to the town, refused to make any concessions. And so it was determined that the lease should not be renewed. One consequence of this was that the Company felt itself much injured, and threatened to do its utmost to wreck the Council's business. It was known that the Company was going to

put omnibuses on all the tramway routes, and to start a brisk competition; also that the Council had to begin the service without experience, with new men, new plant, and new horses. So this notable experiment in municipal tramway management was tried under perhaps the most unfavourable conditions that could have been selected.

It is no light matter for inexperienced men to start a tramway business on a scale that involves 300 cars, 3,000 horses, and 1700 men, even with plenty of time in which to prepare. The only possible practice that the Corporation could give their men and horses was "under difficulties, in tracks temporarily laid down at the depot." Their achievement under the circumstances was little short of miraculous. At midnight on June 30th the last of the Company's cars left the lines. At five the next morning those of the Corporation began to run. Luckily it was a fine Sunday; still more luckily, the citizens were well aware that the experiment was being made in their interest, and were lenient judges of the inevitable defects of the first few days. The general criticism was, that these defects were wonderfully few in number.

It was a trial start, and with so many new men and unaccustomed horses, some confusion might not unnaturally have been expected. On the contrary, however, the service seemed to go like clock-work from the first hour . . . The horses were only given about half work to begin with, and this was gradually increase as they became somewhat seasoned. Within two months from the start they were able for full work, and the complete service of cars was running."[1]

There was no doubt whatever that the new cars were a vast improvement upon the old. They were larger, more roomy, and much easier of access. The corporation, besides improving the service, also reduced the fares. They introduced the halfpenny fare, hitherto unknown; they extended the penny stage, and made twopence the maximum fare. There were not wanting critics to declare that, in face of the keen competition of the old company's 'buses, this was madness, and to prophesy a serious deficit on the first six months. The Corporation refused to be discouraged, and gave their servants the six-day week, not to exceed sixty hours in all, while the Company has steadily declined to concede.

About two months ago the first opportunity was given for judging as to the financial success of the Corporation. To satisfy the very general and not unjustifiable curiosity, a trial balance was struck for the half-year ending December 31, 1894, The Lord Provost announced the gist of this as follows:—

"The result is that, after providing for all charges for working, maintenance of plant (including permanent way), interest, and also payment to the Common Good, as arranged at the rate of £9,000 per annum, the accounts still show a credit balance on the six months' working; or, to give it perhaps in more detail, the revenue has met all working charges, interest on capital, the half-year's payment to the Common Good, upkeep of cars, upkeep of plant and buildings, upkeep of permanent way, covers loss of horses by death and horses found unsuitable and sold under cost, and still leaves a credit balance; and further, nothing has been placed to capital beyond initial expenses incurred prior to 1st July last. It must be kept in mind that this result has been achieved with the keep charges of a full stud of horses, but as these at 1st July were soft and unfit for heavy work, the service was begun with only 108 cars, gradually increasing until now about 250 are in daily use. All fares have been reduced, on some routes to the extent of 33 per cent, while to the great benefit of the people, halfpenny fares have been introduced."

This result, in face of the opposition of the 'buses, is enough to fill every believer in the possibilities of municipal enterprise with gratification, and reflects much credit upon the business powers of the men who engineered it.

Continued in June number.

(1) Let me here say that this quotation is taken, like so many of my facts, from the admirable summary of the year's work now annually published by the Lord Provost, whose innovation may be recommended to the heads of other municipalities; let me also take this opportunity of thanking him and other members and officials of the Corporation for the courtesy with which they gave me the information I desired.—G. F.

MOSCOW'S BIG BATH-HOUSE.

THE death of the enormously wealthy Russian philanthropist, M. de Tegorow, at Moscow, will probably have the effect of opening to the public the great baths which, some nine years ago, he caused to be constructed under the shadow of the Kremlin walls. Not only was provision made for the classes, but also for the masses, while the clothes of each bather who desired it were to be washed and ironed free of cost. M. de Tegorow spent many million roubles in the erection and furnishing of this establishment, which was to have been thrown open on January 1, 1885. Dismayed, however, by the prospect of too much cleanliness, the gypsies, whose aversion to the quality which is generally considered as being next to godliness is well known, determined to devote all their efforts to frustrate the excellent intentions of the philanthropic millionaire, and consequently an old woman who had besought him to permit her to tell his fortune, warned him that he would die on the day that the baths were opened. Like all his countrymen, M. de Tegorow was extremely superstitious, and the dismal prophesy resulted in the huge structure with all its magnificent appointments remaining unopened and unused. Meanwhile, the object of the gypsies had been attained, for nobody would invest money in the construction of other baths while any possibility of those built by M. de Tegorow remained. The result is that Moscow and its citizens have lived up to their reputation of being the dirtiest city and the most uncleanly people, not only in the Empire, but in all Europe. It is likely, however, that before the summer comes, the establishment will be in full operation, and that the people of Moscow will have the oportunity of pronouncing themselves in favor of cleanliness or filth.—*Marquise de Fontenoy in the Philadelphia Press.*

RICHMOND IMPROVING.

SINCE January, 1893, up to date there have been over 2000 houses built in San Francisco, of which it is estimated 15 per cent have been erected in Richmond. Miles and miles of streets have been graded and sewered. A scientific system of sewerage, with proper outlet to the bay, has been laid down, and to-day, it is said, Richmond is the only properly sewered district in the city. It also enjoys excellent transportation facilities, and when the Sutro road is completed and the Geary street line continued it will, with those roads now running through the district, be ahead in this respect also. Saltwater mains have been laid in the district for private baths, flushing sewers, sprinkling streets and putting out fires, for which purposes it is superior to fresh water. The Spring Valley mains give an abundant supply of good fresh water. The location, scenery and shelter is unsurpassed. Its closeness to the park and bay, coupled with the advantages enumerated above, make Richmond, with its magnificent marine views, a favored locality for building homes.—*Daily Call.*

DURABILITY OF RED LEAD ON IRON.

AN old painter thus sums up his fifty years' experience with red lead as a paint on iron work exposed to severe atmospheric influence: "It was about thirty years ago that I first began to take any interest in the causes of decay in paint on iron surfaces, and then I began to think and inspect work I had done ten years previously. About thirty-five years ago I had to do some iron rods, which were string-bolts for holding a large roof together in a flax spinning factory. These rods had been painted with oxide of iron and had rusted. They were cleaned to the iron, and so thoroughly that the iron was made bright with rubbing. I had to paint them with red lead mixed with half oil and half turps, and some liquid dryer of my own make. This dryer was composed of black wad, red lead and oil boiled to a pulp and then thinned with turps. The second coat was about the same as the first. The third coat contained less turps, and the fourth and last coat hardly any turps. This work has not been done since, and is to-day as perfect a protection to the iron as then. Four years ago I visited the place and was allowed to examine these bolts, and when I scraped off the paint the iron was as bright as when I painted them. Another case is a water wheel which has been built seventy-five years. Twenty-five years ago I had a contract to paint this wheel. The owner thought he would have it cleaned and painted. I employed men to clean it thoroughly and to my surprise I found no rust. When I called the attention of the owner to the fact, he informed me that his father had painted it fifty years before, when it was built, and the red lead was made from ore got in a hill just by, and smelted in the village. However, I gave it two coats of red lead, mixed as I have stated. This wheel is still running, has not been painted since and is in good condition. Now, in regard to work rusted on a smooth surface, I have done work of this kind also, which has been exposed to the sea air. My first step is to clean thoroughly, and then, if badly rusted, to mix a thin mixture of lamp black with plenty of turps and dryers, and a little oil, and when dry apply the red lead as above. This will give a lasting job, as the lamp black arrests and prevents the rusting. In conclusion, I would say if any of your readers want a job of iron painting, let them try the above plan, and I am sure that they will be repaid for the trouble and extra cost as compared with the customary *wash* of matallic paint and oil."—*The Hub.*

TRADE PAPERS DESERVE THEIR SUCCESS.

A man who subscribes for a trade paper does so, not only because he is alive to the interests of his trade in general, but because he expects to find in it—and generally does—information and suggestions of value in the conduct of his own business. Such a man reads his paper from end to end, advertisements and all, commenting as he goes along. Many things are jotted down on his memo. pad for every day use, as well as for inquiring further into on his first visit to market. And as it is necessary for a man to be wide-awake nowadays in order to succeed in business, these are the men who subscribe to their trade journal, and are the advertisers' best patrons. The cannot afford to pass anything which promises help or suggests additional profits. Hence, the trade journal is the best medium for advertising things which concern the business man.—*Newspaperdom.*

APARTMENT HOUSES AT POMPEII.

OUR architects should not forget that the modern system of hotels and apartment houses on a vast scale is merely child's play compared with the practice of the ancients in the same direction. Recent excavations at Pompeii have unearthed some enormous buildings of such beauty and solidity in architecure, such perfect drainage, and such provisions for health and comfort as to fill all who have seen them with astonishment. These newly discovered buildings contain thirty or forty immensely spacious apartments on the first floor, and as many on the second. The rooms looked out on a rotunda nearly forty feet long; courts supported by columns surround the bedrooms which opened upon large, ornamental gardens with fountains. Provision for light and air was made upon the most extensive scale. On the second floor were found evidences that there were suites of rooms built upon the flat plan of to-day. In fact, the revelations made by the exhumers at Pompeii show that place to have been one of the most wonderful watering places for splendor, comfort, health, and enjoyment, and gave every evidence that floor-renting, like many other modern improvements, is not a new thing under the sun.—*Carpenter and Builder.*

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

COTTAGE for Marin County shore, Herman & Swain, Architects.

SECOND United Presbyterian Church, Samuel Newsom, Architect.

PROPOSED Hotel near Golden Gate Park, San Francisco, Cal., Samuel Newsom, Architect.

Miss Antique—"How dare you kiss me?" Jack Gallant—"I don't know. Must have had a temporary fit of insanity."—*Rochelle Life.*

"Have you heard that big sleeves are going out George?" "Yes, but I don't believe it." "Why not, pray?" "I don't believe they can get through the door."—*Harper's Bazar.*

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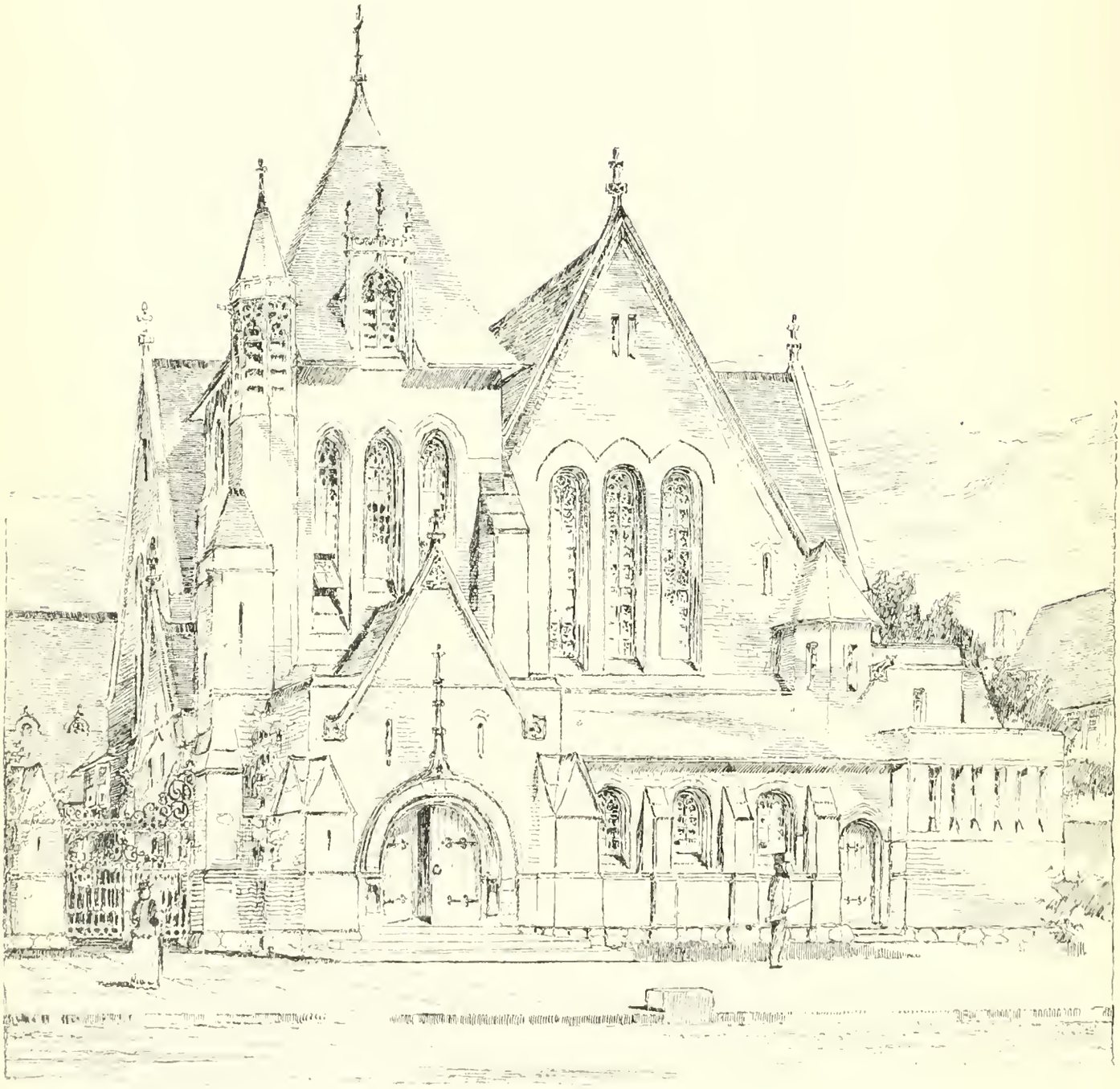

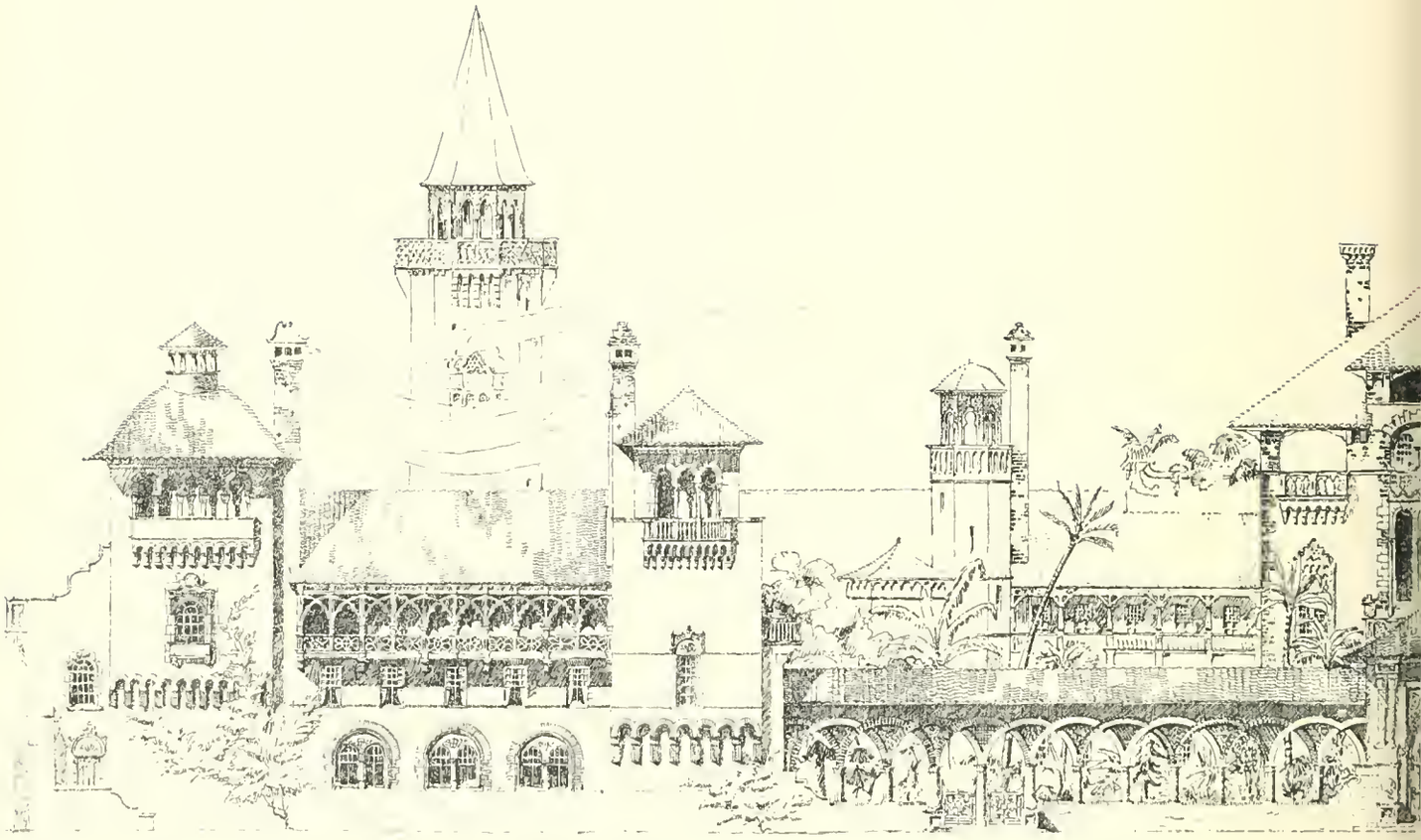

CALIFORNIA ARCHITECT & BUILDING NEWS
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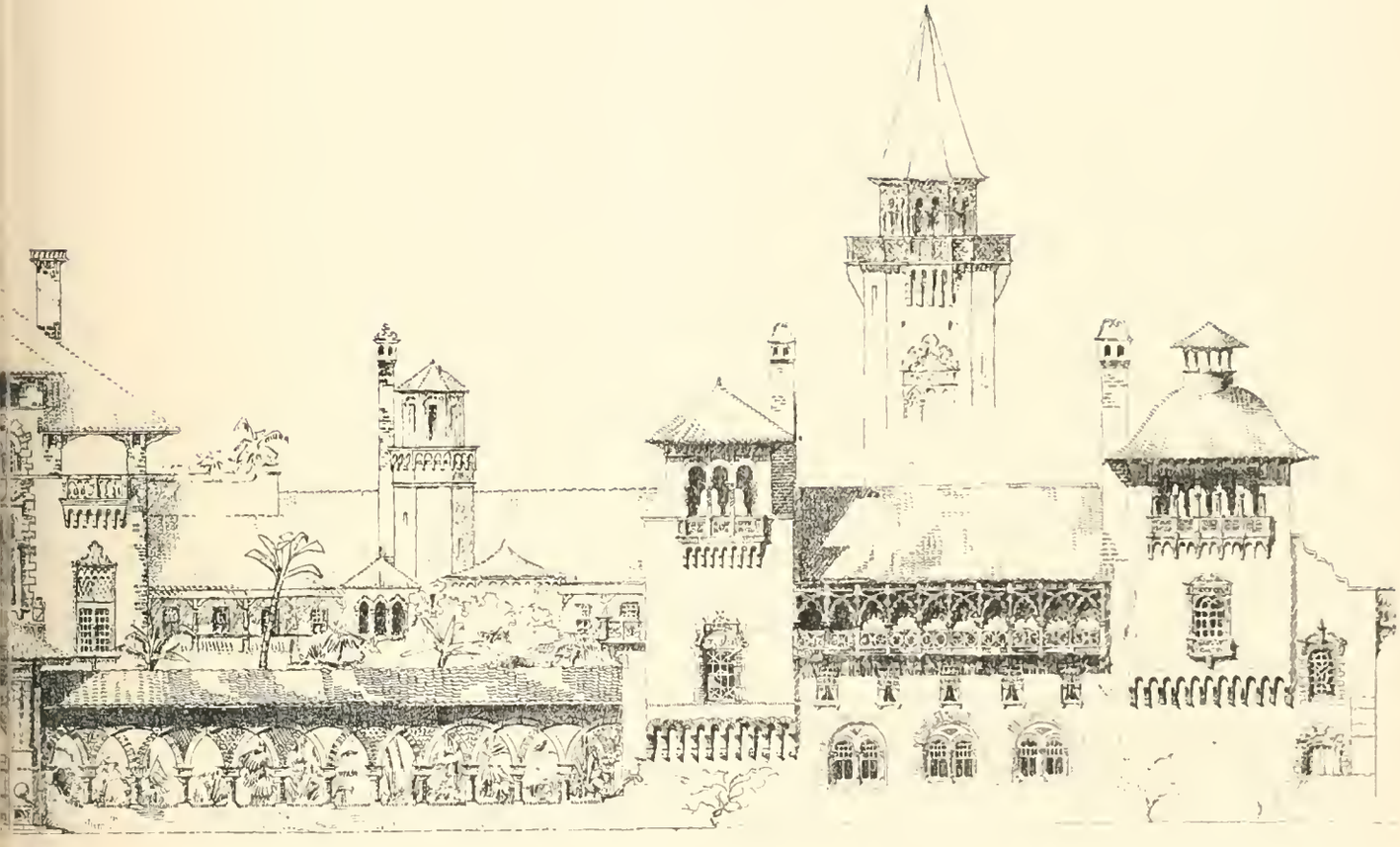

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VOL XVI Nº 5 MAY 1895

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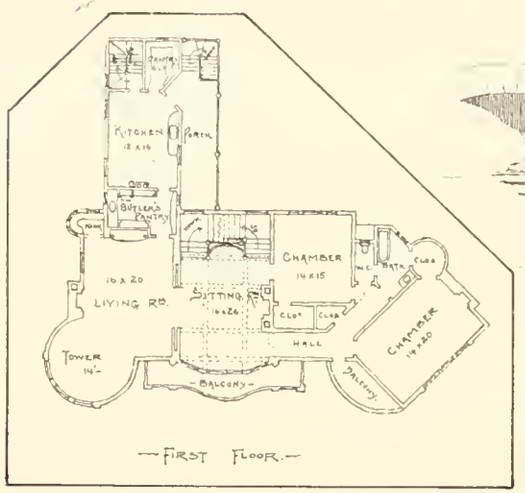
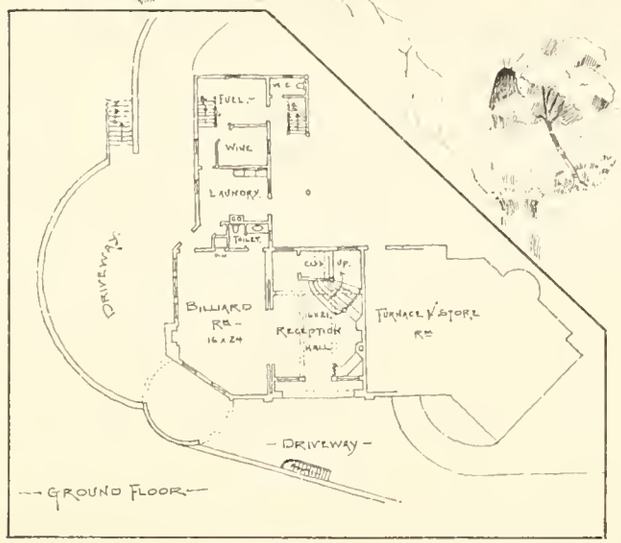


—FIRST FLOOR.—



—GROUND FLOOR—

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. Geo W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

BOOKS AND PERIODICALS.

THE NEW SCIENCE REVIEW. A miscellany of modern thought and discovery, conducted by J. M. Stoddart, published in Philadelphia, New York and London.

This quarterly review made its fourth appearance in April and continues to sustain the promise made in the opening number—while at times it flutters near the boarders of the unknown. It contains much of practical and useful information, along side of John W. Keely "Operation of the Vibratory Circuit."

"Where the Steamboat was Born" by Maggie Symington, as well as autobigraphical notes by Prof. Richard A. Proctor, are very delightful to read, and will prove of interest to the general reader while "Ether and its Functions," by Geo. Fraser Fitzgerald, F. R. S., Trinity College, Dublin, belong to the realm of science; "Railroad Facts and Figures" by Melville Philips come home to the hearts of all, as who does not travel nowadays. The facts here given would have been thought visionary and impossible fifty years ago.

THE YELLOWSTONE NATIONAL PARK. "Sketches of Wonderland" is the title of a beautiful pamphlet published by the Northern Pacific Railroad of which Chas. S. Fee, St. Paul, Minn., is the general passenger and ticket agent, it will be sent to any address on receipt of six cents in stamps. Anyone on the lookout for the summer outing, cannot do better than to send for a copy. This is no common adqertising sheet, but truly a work of artistic merit, that no one can examine with care, without a desire to see something of the "Wonderland" so graphicly described.

OUR DUMB ANIMALS.—This always welcome publication is before us, as ever its hand and pen is raised against cruelty to dumb animals in any form, but more especially to the cruelty of docking horses. As a specimen of Mr. Angell's direct way of writing we quote the following from the April number, after giving extracts from "The Nineteenth Century" by Dr. Geo. Fleming, a distinguished English veterinary surgeon, he adds: 'Any man who, having read it, will be guilty of causing another Polo pony or other horse to be so mutilated, is either a heartless fool, a heartless scoundrel, or an incomprehensible idiot."

The following extract shows that Mr. Angell is as full of fun as he is full of mercy:

Flossie is six years old. "Mamma," she called one day, "If I get married will I have to have a husband like pa?" "Yes," replied the mother, with an amused smile. "And if I don't get married will I have to be an old maid like Aunt Kate?" "Yes." "Mamma,"—after a pause—"it's a tough world for us womeu, ain't it!"

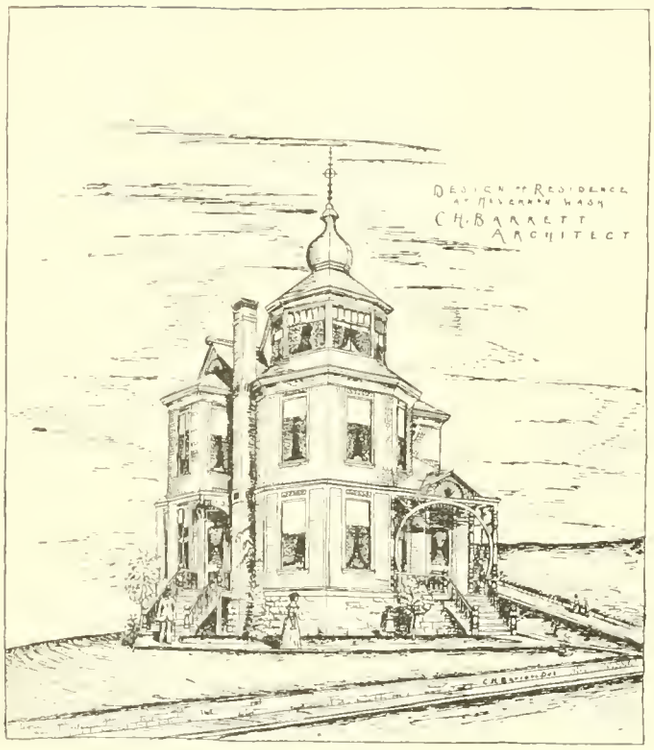
THE FORTNIGHTLY REVIEW for April, 1895, published by Leonard Scott Publication Company, 231 Broadway, New York, comes to hand full of good things as usual, among others one that should be read with care by all lovers of their country, and a sound currency, we refer to "The Monetary Question" by Honorable Alex. Del Mar.

GEYER'S STATIONER.—Devoted to the interests of the stationary, fancy goods and notion trades, a weekly journal published in New York.

As all the business world is interested in good stationary, it is no wonder that a large mass of information can be accumulated every week on this subject, still the reader cannot help being astonished at the great number of useful and pretty things in the stationary line that this journal calls attention to. Notwitstanding the information is designed to call the attention of the retail stationer of what he may want and where he may get it, the general reader cannot fail to find much of interest even in the advertising column.

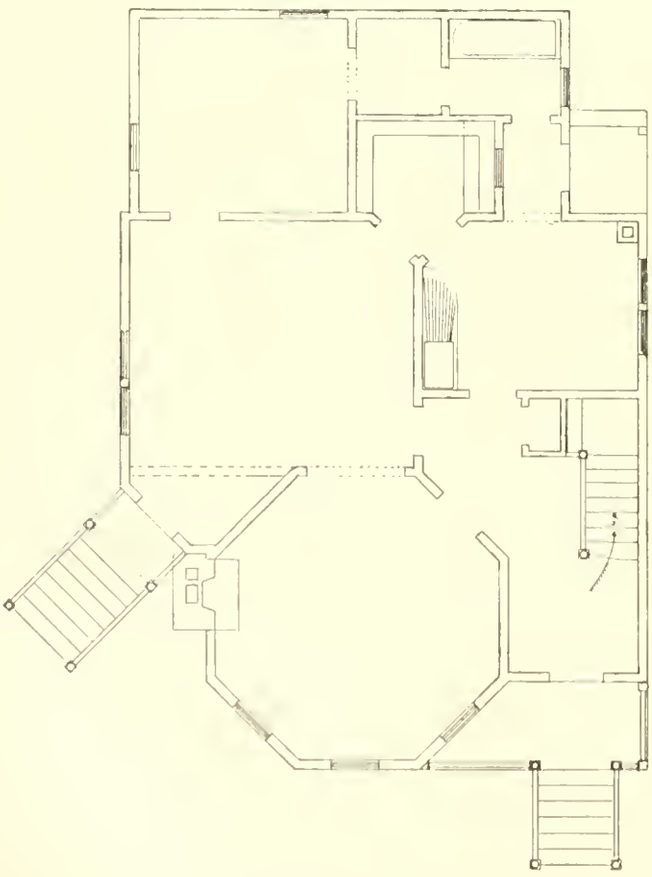
BOSTON MUSEUM OF FINE ARTS.

THE Boston Museum of Fine Arts has recently acquired what is beyond comparison the most important collection of Greek vases ever brought to this country. It comprises fifty-three specimens, and those who are familiar with Greek ceramics will appreciate their value from the fact that they include signed examples of such masters as Euphronios, Hieron, Hermogenes, Kachrylion, Duris, Brygos, Pamphaio, Nikosthenes and Xenokles. A number of them contain interesting inscriptions besides the makers' names; but the most remarkable feature of the collection is its intrinsic beauty. Every specimen is a masterpiece of the type to which it belongs, both in shape and in the quality of the drawing upon it, and will appeal to the artist no less than to the archæologist. Boston is not the only city to be congratulated upon this splendid acquisition; for the opportunity it gives to all American students to see Greek pottery at its very best, and the stimulus which is hereby given to the study of the subject, cannot fail to be of benefit to the country generally. It is pleasant to learn that the museum was able to make this purchase out of its own funds, it having received several important bequests lately for the purchase of works of art of various periods.—*Architecture and Building.*

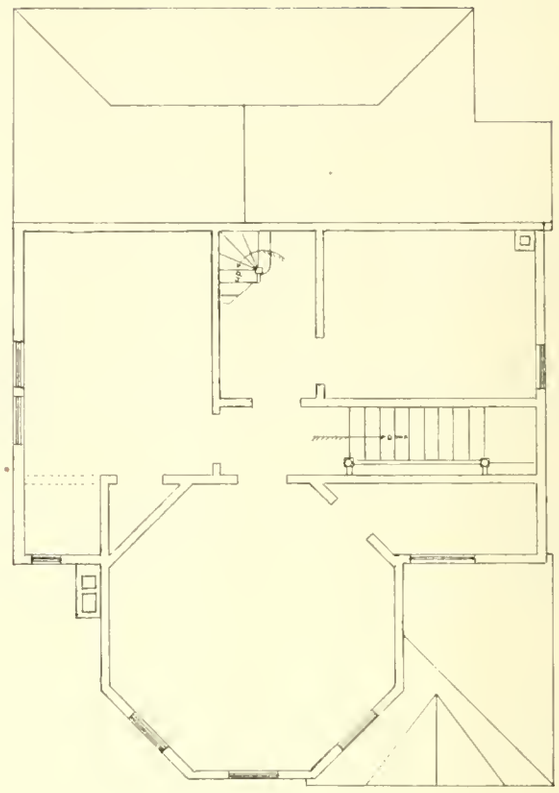


RESULT OF THE CAIRO MUSEUM COMPETITION.

CONSUL-General Penfield, at Cairo, Egypt, reports to the Department of State that in the recent competition of designs submitted for the new Egypt Museum, in Cairo, none of the American competitiors were adjudged a prize. The prizes, five in number, and aggregating $5,000, were secured by Paris architects. The contest was open to architects of the world, and eighty-eight, representing nearly every European country, as well as the United States, participated in the competition.—*Exchange.*



FIRST FLOOR PLAN



SECOND FLOOR PLAN

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

INJURIES FROM BRICK FALLING FROM A WALL.—The fact that a contractor failed to erect proper scaffolding guards about a building because they could not be erected without occupying adjacent property, and that he was prohibited from so occupying it, will not relieve him from liability for an injury to a third person through the absence of such guards.

One superintending the construction of a building, as agent of the contractor, is equally liable with his principal for such injury, or from the negligent construction of the wall.

Mayer v. T. H. Building Co., Supreme Ct. Ala., 16 So. Rep. 620

RIGHTS AND LIABILITIES OF CONTRACTORS.—Where a contractor sues for the reasonable value of extra work, without setting out the building contract, the defense that its value has not been submitted to arbitrators, as stipulated by the contract, is waived by pleading to the merits.

Where the specifications require the contractor to rub down all brick work on street sides, he cannot claim pay for cleaning street walls with acid as for extra work.

A modification of a building contract so as to require pressed brick walls, impliedly requires pressed-brick chimneys, which are a part thereof.

A contractor is not liable for failure to keep the walls plumb, as required by the contract, where the defect is due to the addition of an extra story without strengthening the foundations.

The measure of damages for failure to use the grade of plastering required by a building contract is the difference between the class of work contracted for and that which was furnished.

Chamberlin v. Hibbard, Sup. Ct. Oregon, 38 Pacific Rep. 437.

OBSTRUCTION OF LIGHT.—The easement of light and air cannot be acquired, according to the general current and weight of authority in this country, even by prescription, and of course no right to object to the obstruction of one's windows by a wall erected on the land adjoining can be said to exist. Therefore, one who leases rooms in a building is not entitled to damages from an adjoining land owner because the latter builds so as to shut off the lessees' light on the side of the leased premises.

Lindsey v. 1st. Nat. Bank Asheville, 20 S. E. Rep. 621.

DAMAGES FOR BREACH OF BUILDING CONTRACT.—Where a building contract stipulated that the contractor should pay ten dollars per day as liquidated damages for every day's delay after a certain date, and the building was not finished at such date, and there is no evidence by which the actual damages can be ascertained, the amount of the recovery is governed by the stipulation. Where the owner entered and occupied a part of the building before it was finished, the damages are recoverable only from the time it was agreed to be done and the date on which the owner entered it.

If the stipulation greatly exceeded the actual loss, if there be no approximation between them, and this be made to appear by the evidenco, then and then only, should the actual damages, under such a contract, be the measure of recovery.

Collier v. Betterton, Supreme Ct. Tex., 29 S. W. Rep. 467.

MECHANICS' LIEN IN NEW YORK.—Under the laws of New York, 1885, c. 342, sec. 5, providing that mechanics' liens shall be preferred to any conveyance, judgment, or other claim which was not docketed or recorded at the time of filing the notice of lien, a lien filed after the death of the owner for work done before his death does not attach to the interest of the owner's devisees.

The court said: No provision is found in the statute giving the claimant the right to acquire a lien after the death of the owner. Mechanics' liens are created by statute, and while the law should receive a liberal construction, so as to secure the beneficial purpose had in view by the legislature, yet, as it creates a remedy unknown to the common law, it may not be extended to cases not fairly within the general scope and purview of the statute.

Turbrid v. Wright, Court of Appeals, 39 N. E. Rep. 640.

MEASURE OF DAMAGES FOR BREACH OF CONTRACT.—Where a party has contracted to move a building for a stipulated sum of money, and then neglects or refuses to perform, the other, if he has the work done by some one else, is entitled to recover as damages the difference between the contract price and the reasonable cost or expense of performance in accordance with the contract, if there is any difference.

Anderson v. Nordstrom, Supreme Ct. Minn., 61 N. W. Reporter 1132.

BUSINESS MOSAICS.

Revere Rubber Co., 527 Market street, San Francisco, manufacturers "Schenck" Swinging Hose Reel. The company claim the use of this hose will reduce the Insurance rate. It is adapted for mills, factories, hotels, public buildings and general inside fire protection.

Syms—"I don't understand this question of labor and capital." GARNER—"It's very simple. Labor wants capital at the least possible exertion, and capital wants labor at the very smallest outlay."—*The Wasp.*

If you are going to build use Neponset Papers! Why? Because if you use this paper, manufactured solely by F. W. Bird & Son, you will have a paper that is sure to give satisfaction as it makes a handsome and permanent covering for roofs and sides of store houses, factories, poultry houses, farm and other outbuildings. It is very much cheaper than any tar and felt or composite roof, and is a great deal less in cost than shingles. So much for Neponset Red Rope Roofing Fabric, also Neponset Black Building Paper, water, air and vermin proof.

McGilder—"Prize fighters are nothing more than a lot of beggars." O'JONES—"How do you make it out?" MCGILDER—"Because they are always striking somebody for money."—*Brooklyn Eagle.*

On or before May 31st our Principal Office, heretofore located at N. W. corner Pine and Montgomery streets, will be removed to Foot of Third street, below Third and Townsend street R. R. Depot, and on the line of the Kearny and Third street, Electric road; all Market Street Cable and Mission Street Electric cars transfer to this line.

We will maintain an Uptown Order Office at 405 Montgomery street, corner of California street, and will be pleased to see you at either office. Our telephone numbers are:—Principal Office, Foot of Third Street, Main 1047. Uptown Order Office, 405 Montgomery street, Main 1480.

If you have no gas cooking stove in your house, do not delay ordering one at once. Your wife will thank you, your coal bill will decrease enough to pay for the extra gas, and you save a lot of bother in dust and ashes. The San Francisco Gas Light Co., Stove department, 226 Post street, will find exactly what you want.

She—"Do you believe in spirits?" HE (from Kentucky)—"I do when they are good."—*Peck's Son.*

When a man decides upon improving his shop, factory or farm, by the addition of power, he naturally looks for something entirely up to date. He investigates considers, and finally decides to buy an Ajax Coal Oil Gas Engine as meeting his requirements more fully, and being safer, than any other power obtainable. Palmer & Rey, San Francisco, Cal., the manufacturers of this engine, have carried the gratitude of the public by placing within its reach a reliable, economical power, that defies the restrictions of insurance companies. It is the latest and best.

"Does this roof leak always?" AGENT—"Oh, no, ma'am, only when it rains."—*Chicago Inter-Ocean.*

M. S. James, Pacific Coast Representative of the J. L. Mott Iron Works has his office at room 35 Flood Building, San Francisco. The quality of the goods manufactured and supplied to the trade by this firm are too well-known to require a recommendation from us, for like good wine they requires no bush.

Nevertheless, to those about to build, or renovate their premises we would strongly urge the importance of giving Mr. James a call before deciding what class of plumbing materials to order, as anything from the smallest house to the largest hotel, is greatly improved by having first-class materials used for all plumbing required. It is a great satisfaction to deal with a house that you are sure of getting your moneys worth.

"The Old May Flower" Roofing Plates, Re-dipped Old Process, Extra Quality. These plates are guaranteed to be coated with 19 lbs. metal on each box of 14x20 and 38 lbs. metal on 20x28, which is a heavier and better coating than any other works put on Re-dipped Ternes. Made of the softest and best quality of steel, true to size, cut square and free from blisters and other imperfections.

Architects and builders should bear these facts in mind when making specifications where durable and first-class roofs are desirable. Sole importers, W. W. Montague, 309, 311, 313, 315 and 317 Market street, San Francisco, and 122 North Los Angeles street, Los Angeles.

Mrs. Hunter—"I like the flat because it has so many nice closets in it." AGENT—"Great Scott, madame! Those are not closets—they are bedrooms."—*Wasp.*

Ives Patent Sash Locks.—It is important that every house should be made as safe as possible against the attack of sneak thieves, nothing that has been devised in the way of Sash Locks appear to answer the purpose so well as the above mentioned patent sash lock manufactured only by Hobart B. Ives Co., New Haven, Conn. The important features are in securely locking when opened or closed, and simultaneously carrying the Meeting Rail in position, and drawing them closely together. Price list mailed free showing fifty styles in Sash Locks and door bolts. See their advertisement on page xi of this journal.

"So old Squibbs is ill eh?" "Yes; was so bad yesterday that they considered a consultation necessary." "Consultation of doctors?" "No; lawyers."—*Judge.*

Trade Notice.—Messrs. N. & G. Taylor Co., Tinplate Manufacturers, of Philadelphia, announce that they have given up their old quarters in Water street, New York City, and have moved to the Cable Building, 621 Broadway where they have opened new and commodious offices with a corps of assistants in charge of Mr. George Livingston, a gentlemen who has long been identified with the building and kindred trades of New York and Brooklyn.

The firm also announce that they have secured larger and better warehouse facilities for the quick filling of orders. Consumers wanting their special brand, the celebrated Genuine Taylor "Old Style", extra heavy coated, and also other brands, manufactured by this firm, can secure prompt attention by communicating with the firm's offices, as above stated.

"And I only married to reform you!" "Yesh, but of coursh a man drinksh more if he marries such a fool."—*Life.*

If you want to stop the slamming of that door, all you have to do is to order "The Norton Door Check and Spring" this will render the slamming of doors an impossibility. A simple and durable air cushion check, charging itself when door opens. Not liable to get out of order. Its merits have been proved by being in constant use in this city and elsewhere for the last twelve years. Duplicate parts always on hand. Frank D. Morrell, 593 Mission street near Second street, San Francisco.

There are at the present time few first-class buildings being erected that do not have one or more towers upon them, and no feature of the modern building adds more to its architectural beauty than a graceful and well-proportioned tower. Yet in their construction a difficult problem has invariably arisen as to a suitable covering—especially for conical towers, for which there has been nothing in the market adapted, the only available covering being wood shingles, which split when drawn to the convex form of the tower. Slate will break from the same cause, and metal shingles of forms designed for straight roofing, involves a waste of just fifty per cent of materials in fitting to cones and a greater waste of time in putting on, as after the first course each succeeding one has to be reduced in size and practically made over by the roofer.

GRADUATED TILES

Messrs. Merchant & Co., the well-known Philadelphia tin-plate manufacturers and importers, have recently put upon the market a Graduated Tile, which is a valuable addition to their regular "Spanish" Metal Tile, and which is adapted for covering all conical towers, circular roofs, turrets, domes, etc., being so graduated in size and form as to fit almost any radius. This title is manufactured in copper, steel or tin, the latter being painted in imitation of the red clay tile. As tower roofs are always the most difficult portions of a building to get at to repair or repaint, they should be covered with that which will never require either. Copper, therefore, is the only material that will meet these conditions, being indestructible, and becoming richer in appearance with age. The Merchant & Co's Metal "Spanish" Tile has been specified by leading architects throughout the United States both for private and public buildings. Numerous buildings at the World's Fair were covered with this tile, prominent among which might be mentioned the Colorado, Minnesota and Missouri State Buildings. This tile is also in use on the new City Hall at Tacoma, Wash., the new Union Depot, Denver, Grand Central Station, Portland, Ore., and the Chamber of Commerce Building, Portland, Oregon; also the new Princeton (N. J.) Inn., a beautiful building, the roof of which is almost entirely covered with copper tile, and presents a very rich appearance. Girard Building, Phila.; San Bernardino Court House, Cal.; Baptist Church at Gouveneur, N. Y.; Congregational Church at Gloverville, N. Y.; Bingham Hall, Canandeigua, N. Y.; Crocker Building, Santa Barbara, Cal.; College Arms Hotel, De Land, Fla.; People's Institute, Chicago, Ill.; Winthrop College, Rock Hill, S. C.; Grace Church, Nashville, Tenn.; Church at Fulton, N. Y.; Central School, Guthrie, O.; Library Building, Lawrence, Kan.; Manhattan School, Manhattan, Kan.; City Hall, Wilke Barre, Pa.; Modesta Bank Bldg., Modesta, Cal.; Swain Residence, W. Philada.; First National Bank, Orlando, Col.; Pens. Hospital for Insane, Phila.—*The Engineering Magazine, May, 1895.*

BUSINESS MOSAICS.

Austin near Larkin. Eight circular wood tanks; owner, Olympic Salt Water Co.; architect, H. A. Schulze; contractor, Krogh Mfg. Co.; signed, April 19; filed, May 3; cost $3285.

Bryant near 22d Ave. To build; owner, E. J. Stanley; contractor, A. Olsen; cost $3500.

Bryant Ave. [Preston Place]; To build; owner, T. F. Kiernan; architect, A. J. Barnett; contractors, Quinn & Barrett; signed, April 29; filed, April 30; cost $1608.

Brannan near 4th. Bricklaying for church; owner, Rev. D. Nugent; architect, J. J. Clark; contractor, James Glynn; signed, April 10; filed, April 12; cost $5.25 per M.

Brannan near 4th. Artificial stone work, etc.; owner, Rev. D. Nugent; architect, J. J. Clark; contractor, S. Giletti; signed, April 20; filed, April 20; cost $4000.

Broderick near Ellis. To build; owner, Mrs. Mary Cochrane; contractor, J. J. Manseau; signed, April 21; filed, April 23; cost $1700.

California near Gough. Cabinet work; owner, J. C. Coleman; architects, Percy & Hamilton; contractor, R. Herring; signed, April 13; filed, April 13; cost $3750.

California near Baker. To build; owner, Mary A. Townsend; contractor, W. W. Rednall; signed, April 18; filed, April 19; cost $1800.

Clay near East. Brick building; owner, J. De La Montanya; architect, Percy & Hamilton; contractors, Thomas A. Day & Sons; signed, April 29; filed, April 30; cost $15,673.

Clay near East. Concrete foundation; owner, J. De La Montanya; architects, Percy & Hamilton; contractors, Cushing-Wetmore Co.; signed, April 15; filed, April 15; cost $3030.

Clay near East. Brick, stone and iron work; owner, J. De La Montanya; architects, Percy & Hamilton; contractors, Peacock & Butcher; signed, April 26; filed, April 30; cost $10,075.

Clayton and Oak. Two two-story flats; owner, J. F. English; contractor, J. V. Hull; cost $8000.

Clement near 5th Ave. To build; owner, Irwin Ingermon; contractor, R. Cook; signed, April 12; filed, April 13; cost $2315.

Clementina near 5th. Additions and alterations; owner, S. Pamery; contractor, J. W. Wyllie; cost $2500.

Clement near 5th Ave. Three two-story frame dwellings; owner, D. F. McGrath; architect, C. F. Robertson; day's work; cost $12,000.

Clement near 5th Ave. Plumbing; owner, D. F. McGrath; architect, C. F. Robertson; contractor, G. C. Sweeny; cost $999.

Davis and Washington. Sewers, plumbing, etc.; owner, Estate of J. Ivancovich; architects, Pisses & Moore; contractor, R. A. Vance; signed, April 26; filed, May 13; cost $1894.

Devisadero near Page. To build; owner, C. J. Kaighen; architect, B. A. Brown; contractor, Pettersen & Person; signed, May 9; filed, May 9; cost $1532.50.

De Haro near 23d. Cottage; owner and builder, D. Pollack; day's work; cost $1500.

Douglass and 24th. To build; owner, James Curtin; architect, A. J. Barnett; contractor, Wm. Plant; signed, April 15; filed, April 22; cost $2700.

Diamond near 22d. Cottage; owner, James Loftus; architect, Chas. Koenig; contractor, A. Petry; signed, April 12; filed, April 13; cost $1530.

Eight near Howard. Alteration and additions; owner, W. Ehrenpfort; days' work; cost $1000.

Eighteenth and Hattie. To build; owner, Agnes Petzold; architects, Martens & Coffey; contractor, J. Bucher; signed, April 18; filed, April 19; cost $3808.

Fair Oaks and 25th. To build; owner, Ed. F. Delger; architects, Kenitzer & Barth; contractors, Anderson Bros.; signed, April 25; filed, April 25; cost $3297.

Fair Oaks near 23d. To build; owner, John Valsangiacomo; architect, A. J. Barnett; contractor, Ed. Mooney; signed, May 10; filed, May 10; cost $3250.

Fella Alley near Powell. To build; owner, August Schiller; contractor, Herman Hansel; signed, April 22; filed, April 24; cost $3000.

Folsom and Rich. Additional story; owner, James Mackin; day's work; $3000.

Folsom street, No. 850. Additions; owner, Mrs. Roach; contractor, F. Schmitz; cost $900.

Folsom near 5th. Alterations and additions; owner, P. E. Duckein; architect, C. M. Rousseau; contractor, Geo. C. Nail; signed, April 18; filed, April 20; cost $1880.

Folsom near 24th. Alterations and additions; owner, H. Mangels; day's work; cost $1000.

Fremont near Frederick. To build; owner, Fred Heine; architect, E. J. Vogel; contractors, Ogle & Smith; signed, April 8; filed, April 11; cost $3505.

Francisco near Dupont. To build; owner, Mrs. Annie Golelli; architect, C. M. Rousseau; contractor, Jos. Kennedy; signed, April 11; filed, April 12; cost $2270.

Franklin and California. Painting; owner, Edward Coleman; architect, W. H. Lillie; contractor, J. P. Fraser; signed, April 18; filed, April 19; cost $366.25.

Fourth Ave. near Clement. To build; owners, J. Levy and Mrs. M. Levy; architect, H. J. Kraetzer; contractor, W. R. Kenny; signed, May 1; filed, May 3; cost $1200.

Fourth Ave. and Point Lobos Ave. To build; owner, R. R. Hind; contractors, Townley Bros.; cost $5000.

Fourteenth near Guerrero. To build; owner, J. M. Griffith; contractors, Hyde & Cox; cost $3500.

Fifth and Brannan. Lumber sheds; owners, Scott & Van Ansdale Lumber Co.; contractor, H. Munster; cost $800.

Fulton near Steiner. To build; owner, J. J. Dowling; architects, Havens & Toepke; contractor, J. H. McKay; signed, April 17; filed, April 19; cost $3595.

Geary near Jones. To build; owner, Thos. Morton; cost $6000.

Grove near Shrader. To build; owner and builder, W. A. Butler; cost $4000.

Guerrero near 22d. To build; owner, Carrie L. Dick; architect, McDougall & Son; contractor, M. M. Cowie; signed, April 7; filed, April 18; cost $4722.

Guerrero near 22d. Plumbing; owner, Carrie L. Dick; architects, McDougall & Son; contractor, W. F. Wilson; signed, April 17; filed, April 18; cost $1010.

Hayes and Devisadero. Additions; owner, Pacific Hebrew Orphan Asylum and Home Society; architects, Wright & Sanders; contractor, Thomas McLachlan; signed, April 23; filed, April 26; cost $17,900.

Hayes and Devisadero. Grading, concrete, etc.; owner, Pacific Hebrew Orphan Asylum and Home Society; architect, Wright & Sanders; contractors, Peacock & Butcher; signed, April 23; filed, April 26; cost $12,500.

Hayes and Devisadero. Plumbing, etc.; owner, Pacific Hebrew Orphan Asylum and Home Society; architects, Wright & Sanders; contractors, McDevitt & Cleary; signed, April 22; filed, April 26; cost $3900.

Hayes near Laguna. To build; owner, John Crowley; architect, T. J. Welsh; contractor, P. Maloney; signed, May 8; filed, May 10; cost $4300.

Hyde and Pine. To build; owner, Charles Schlesinger; architect, E. J. Vogel; contractors, McCullock & Glunz; signed, April 16; filed, April 20; cost $8087.

Hyde near Union. Alterations and additions; owner, W. Simon; cost $1000.

Hampshire near Solano. To build; owner, John Francis; contractor, Henry Plant; signed, April 22; filed, April 27; cost $1080.

Haight and Baker. To build; owner, John C. Spencer architect, F. P. Rabin; contractor, Wm. Tegeler; signed, April 20; filed, May 6; cost $6815.

Howard near 22d. Carpenter work; owner, Henry Smith; architect, C. F. Robertson; contractor, C. Larsen; signed, April 24; filed, May 9; cost $4000.

Jackson near Walnut. To build; owner, Henry H. Bull; architect, R. H. White; contractor, John Furness; signed, April 22; filed, April 24; cost $5399.

Jackson near Scott. Carpenter work; owner, Augusta K. Gibbs; architect, Willis Polk; contractors, Knowles & Elam; signed, May 1; filed, May 7; cost $10,206.

Jackson near Scott. Painting, etc., owner, Augusta K. Gibbs; architect, Willis Polk; contractor, John H. Keife; signed, May 2; filed, May 7; cost $1750.

Jackson near Scott. Planing mill work; owner, Augusta K. Gibbs; architect, Willis Polk; contractors, Knowles & Elam; signed, May 1; filed, May 9; cost $4750.

Jackson near Scott. Stone work; owner, Augustus K. Gibbs; architect, Willis Polk; contractor, John D. McGilvray; signed, May 1; filed, May 9; cost $1200.

Jackson near Scott. Stable; owner, Augusta K. Gibbs; architect, Willis Polk; contractors, Knowles & Elam; signed, May 2; filed, May 9; cost $3118.

Kearny and Post. Iron, steel work, etc.; owner, James Stanton; architect, J. E. Krafft; contractors, P. H. Jackson & Co.; signed, May 2; filed, May 3; cost $2013.

King near 4th. To build; owner, Buffalo Brewing Co.; contractor, J. Bucher; cost $5000.

Laguna near Oak. Alterations; owner, Mrs. McBride; contractors, Searle & Co.; cost $1000.

Laurel near Webster. Brick and cement work; owner, Henry Hock; contractor, Weinochl & Franz; signed, May 8; filed, May 9; cost $2030.

Lyon near Haight. To build; owner, Francis Ziberbier; architect, J. F. Kenna; contractor, H. P. Connely; signed, April 13; filed, May 2; cost $4475.

Market near Sixth. Inside finish of billiard room in Spreckles building; owner, C. A. Zinkand; architect, Emil John; contractors, Bader & Finke; signed, April 11; filed, April 22; cost $1725.

Mason near Eddy. Alterations and additions; owner, S. Klavenmeyer; contractors, Williams & Woods; cost $1000.

McAllister near Polk. Raising old building, etc.; owner, T. M. Quackenbush; day's work; cost $2500.

McAllister near Hyde. Grading work; owner, California Bible Society; architect, McDougall & Son; contractor, A. E. Buckman; signed, May 8; filed, May 8; cost $1680.

Mission street No. 737. Alterations; owner, W. C. Shiels; contractor, W. Little; cost $3000.

Minnesota near Sierra. Alterations to school house; owner, City of San Francisco, architect, Thomas J. Welsh; contractor, Alex. L. Campbell; signed, March 26; filed, March 26; cost $3587.

Minnesota near Sierra. Painting school house; owner, City of San Francisco; architect, Thomas J. Welsh; contractor, L. J. Dwyer; signed, March 26; filed, March 26; cost $1779.

Pacific Ave. near Octavia. Carpenter work; owner, Mrs. Elizebeth Blackwood; architects, McDougall & Son; contractors, Peterson & Olsen; signed, May 6; filed, May 9; cost $6750.

Pacific Ave. near Octavia. Excavation, brick work, etc.; owner, Mrs. Elizabeth Blackwood; architects, McDougall & Son; contractors, Fennell & Son; signed, May 6; filed, May 6; cost $1114.

Pacific Ave. near Octavia. Plumbing, etc.; owner, Mrs. Elizabeth Blackwood; architects, McDougall & Son; contractor, J. E. Britt; signed, May 6; filed, May 6; cost $1095.

Point Lobos Ave. and Fifth Ave. Stone sidewalks, etc.; owner, Society Francaise, etc.; architect, E. Deplerre; contractors, Gray Bros.; signed, May 9; filed, May 10; cost $1150.

Point Lobos Road near Pacific Ocean. To build; owner, Adolph Sutro; architect, Colley & Lemme; contractors, Campbell & Pettus; signed, April 10; filed, April 13; cost $35,445.

Powell stree, Nos. 13-15. Alterations and additions; owners, Chas. A. and Silas Green; architects, Havens & Toepke; contractor, Geo. H. Walker; signed, April 11; filed, April 12; cost $6000.

Presidio. Brick building for barracks; owner, U. S.; contractor, F. L. Hansen; cost $10,000.

Sacramento near Maple. Brick building; owner, T. T. Williams; architect; A. C. Schweinforth; contractor, W. A. Butler; signed, April 12; filed, April 17; cost $17,000.

Sacramento near Maple. Plumbing; owner, T. T. Williams; architect, A. C Schweinfurth; contractor, W. F. Wilson; signed, April 12; filed, April 17 cost $1600.

Sacramento near Maple. Electric and gas fixtures; owner, T. T. Williams; architect, A. C. Scheinfurth; contractor, S. F. Novelty and Plating works; signed, April 12; filed, April 17; cost $250.

Sacramento near Maple. Elevator work; owner, T. T. Williams; arehitect, A C. Schweinfurth; contractor, John Hammond & Co.; signed, April 12; filed, April 17; cost $800.

Sacramento near Maple. Electric light wiring; contractors, Will & Fink Co.; signed, April 12; filed, April 18; cost $270.

Sacramento near Maple. Heating and ventilation, etc.; owner, T. T. Williams; architect, A. C. Schweinfurth; contractors, W. W. Montague & Co.; signed, April 12; filed, April 17; cost $2000.

Sacramento and Pierce. Alterations and additions; owner, Mrs. Minnie H. Alderson; architect, F. B. Wood; contractor, R. Currie; signed, April 26; filed, April 27; cost $3595.

San Jose Ave. near 25th. To build; owner, Thos. C. Van Bibber; architect, W. H. Wharff; contractor, John A. McDonald; signed, April 12; filed, April 13; cost $1272.

San Jose Ave. near 25th. Plumbing; owner, T. C. Van Bibber; architect, W. H. Wharff; contractors, Levy & Parker; cost $620.

Sanchez and 14th. To build; owner, Fred Hutschmidt; architect, E. J. Vogel; contractor, J. W. Coburn; signed, April 13; filed, April 13; cost $3296.

Shotwell near 24th. To build; owner, Mrs. Ward; contractor, W. A. Lang; cost $3000.

Sixth and Stevenson. Excavations, concrete, cement, brick, etc., for four-story brick; owner, M. Schwerdt; architects, Laist & Schwerdt; contractor, Adam Beck; signed, April 19; filed, May 4; cost $12,575.

Sixth and Stevenson. Carpenter work; owner, M. Schwerdt; architects, Laist & Schwerdt; contractor, S. H. K nt; signed, April 16; filed, May 4; cost $3737.25.

Sixth and Stevenson. Terra cotta work; owner, M. Schwerdt; architects, Laist & Schwerdt; contractors, A. Steiger Sons; signed, April 26; filed, May 4; cost $2785.

Sixth and Stevenson. Plumbing, etc.; owner, M. Schwerdt; architects, Laist & Schwerdt; contractors, Shephard Bros.; signed, April 23; filed, May 4; cost $1961.

Seventh near Folsom. Alterations and additions; owner and builder, C. Mason; cost $4000.

Steiner near O'Farrell. Alterations and additions; owner, Mrs. Schilling; contractors, Patterson & Person; cost $1500.

Steiner near Filbert. To build; owner, Augustus and Eliza La Croix; contractor, J. J. Wils n; signed, April 15; filed, April 15; cost $1325.

Second Ave. near California. Six two-story frame buildings; owner, Stewart Menzies; architect, J. C. Pelton; contractors, Campbell & Pettus; signed, May 8; filed, May 9; cost $10,238.

Sixteenth near Valencia. To build; owners, R. J. Taussig and Adolph Eisenback; architects, Salfield & Kohlberg; contractor, L. B. Schmid; signed, May 2; filed, May 10; cost $6850.

Sixteenth near Valencia. Plumbing and gas-fitting; owners, R. J. Taussig and Adolph Eisenback; architects, Salfield & Kohlberg; contractors, Clark & England; signed, May 4; filed, May 10; cost $1150.

Twenty-second near Noe. To build; owner, L. Schnetzler; contractor, H. R. Schmuckert; signed, April 20; filed May 4; cost $3220.

Twenty-fourth near Sanchez. To build; owner, Moses Mossford; architect, R. Trost; contractor, Job. Hatfield; signed, May 6; filed May 6; cost $1475.

Twelfth Ave. near Clement. To build; owner, Geo. C. Harrison; contractor, Hans Peterson; signed, April 21; filed April 26; cost $1775.

Twenty-sixth and Church. Cottage; owner, John Todt; architect, W. Schrof; contractor, H. Behrens; cost $2745.

Twenty-sixth near Howard. To build; owner, B. Struven; architect, Emil John; contractor, F. A. Hellmuth; signed, April 27; filed, May 1; cost $3526.

Twenty-ninth near Sanchez. Cottage; owner, W. F. J. Dale; contractor, H. R. Schmuckert; signed, April 17; filed, April 17; cost $1575.

Union near Fillmore. Two-story two tenement buildings; owners, Dr. John and Lizzie J. Hemphill; architects, McDougall & Son; contractor, J. H. McKay; signed, April 16; filed, April 18; cost $5790.

Union and Fillmore. Plumbing, gas-fitting, etc.; owners, Dr. John and Lizzie Hemphill; architects, McDougall & Son; contractor, H. Williamson; signed, April 16; filed, April 18; cost $1280.

Union near Larkin. Additions and alterations; owner, Thomas Scott; architect, W. Mooser, Jr.; contractor, Dwyer, cost $1500.

Union near Larkin. To build; owner, J. W. Lomerlino; day's work; cost $5000.

Vallejo near Van Ness. To build except plumbing; owner, Frank Otis; architect, Seth Babson; contractors, Hickox & Tate; signed, April 11; filed, April 11; cost $2695.

Valencia and 15th. Three-story brick; owner, Rose A. Pickering; architects, Havens & Toepke; contractors, Ackerson & Paterson; signed, April 18; filed, April 22; cost $9613.

Valencia and 15th. Plumbing; owner, Rose A. Pickering; architects, Havens & Toepke; contractor, H. Williamson; signed, April 17; filed, April 22; cost $1761.

Vermont and 24th. Alterations; owner, A. Schuman; contractor, Gus. Williams; cost $1600.

Washington near Laguna. To build; owner, J. D. Tallant; architect, W. H. Lillie; contractor, J. G. Adams; signed, April 27; filed, April 29; cost $1100.

Washington near Devisadero. Two two-story frames; owner, Geo. W. Lippman, architect, J. W. Littlefield; contractor, O. E. White; signed, May 2; filed; May 3; cost $5807.

DUNHAM, CARRIGAN & HAYDEN CO.

17 and 19 BEALE ST., San Francisco Cal.

WE show here an illustration of our **AMERICAN SLIDING DOOR HANGER** for which we claim unusual advantages, great saving in time and expense, and superior excellence in operation, together with the following features not obtained or claimed in other hangers.

TRACKLESS—We obviate the use of a track above or below, and the special framing necessary where a track is used.

NO WHEELS—There are no wheels to bind by reason of warped or sagging track. The movement is perfectly PARALLEL and insures against binding.

NOISELESS—The operation is noiseless and extremely easy.

DOORS EASILY ADJUSTED—The door can be readily adjusted plumb, raised or lowered by drawing them into the opening which gives easy access to the adjusting screws.

QUICKLY PUT UP The Hangers can be put up in one-third the time required for overhead hangers.

SUBSTANTIAL—The parts are made to carry three times the weight of doors of the sizes given.

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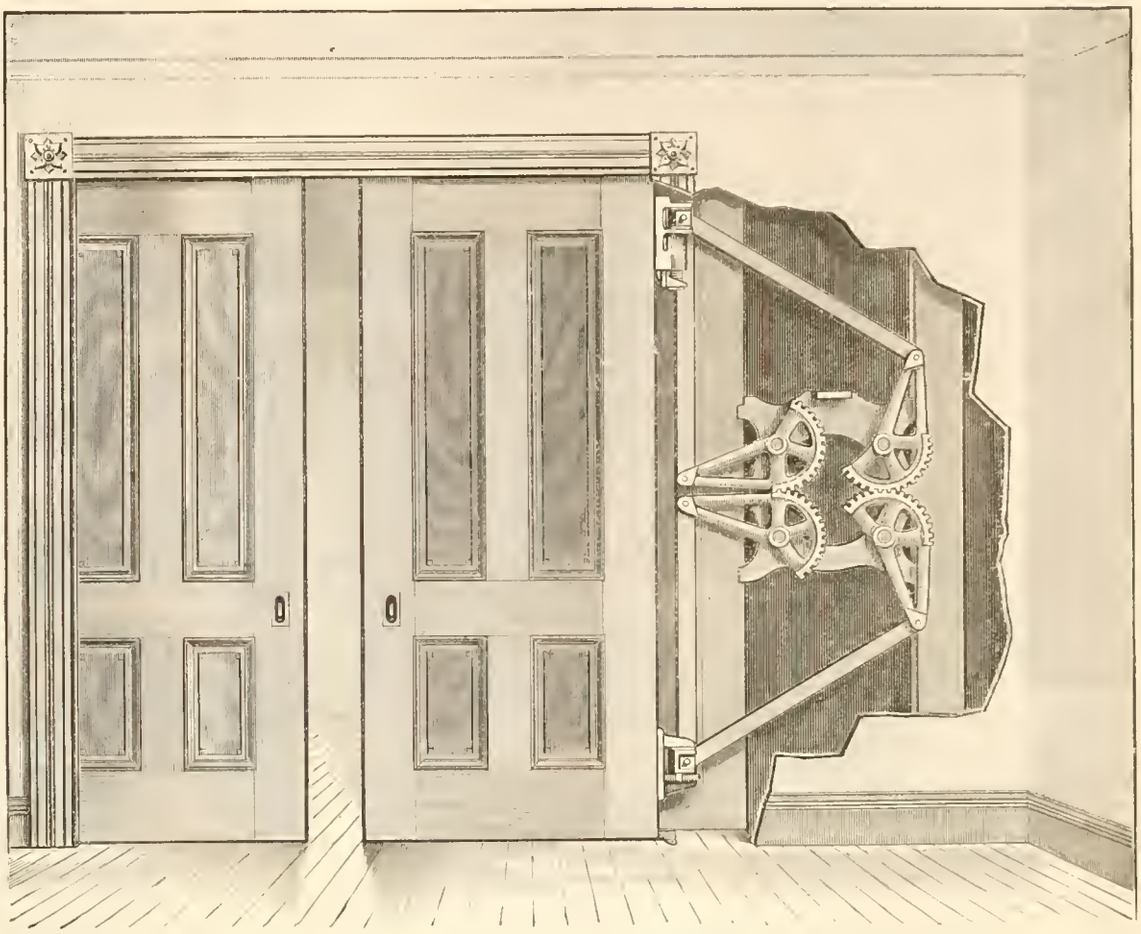

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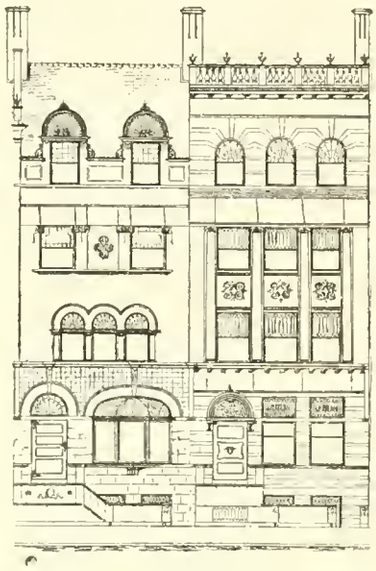

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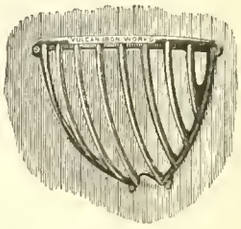

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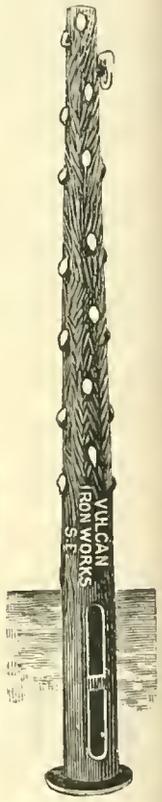

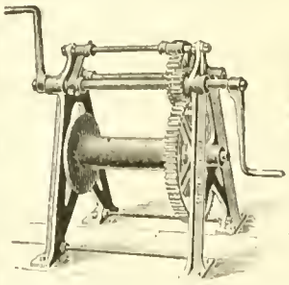

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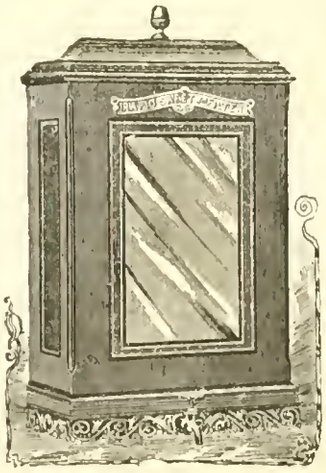

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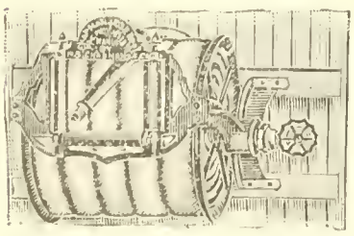

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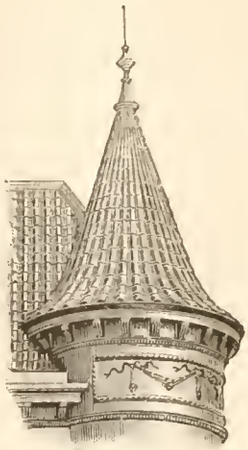

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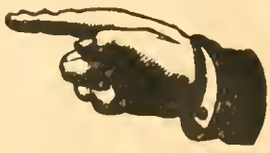

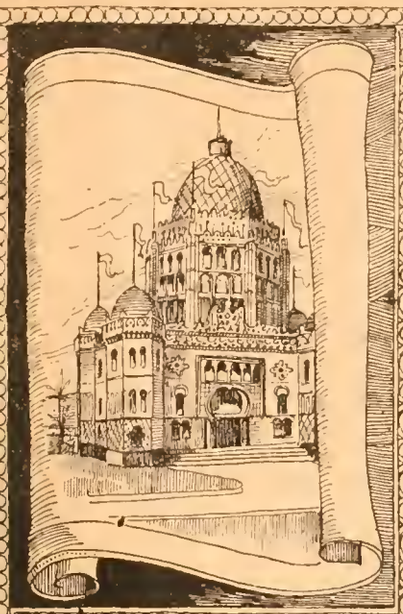

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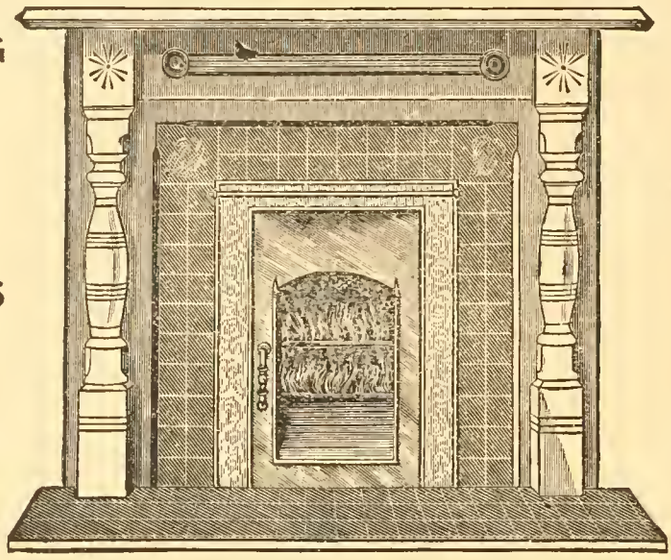

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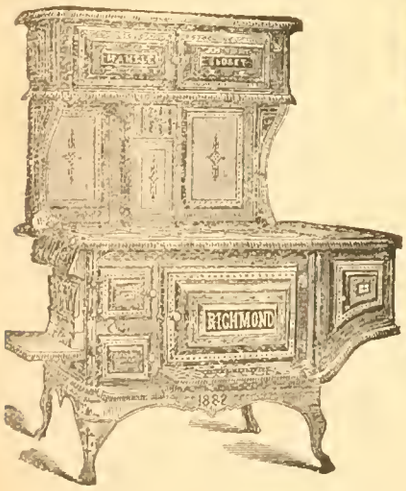

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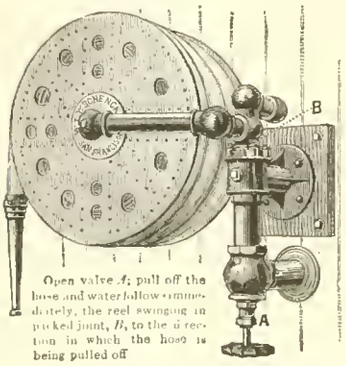

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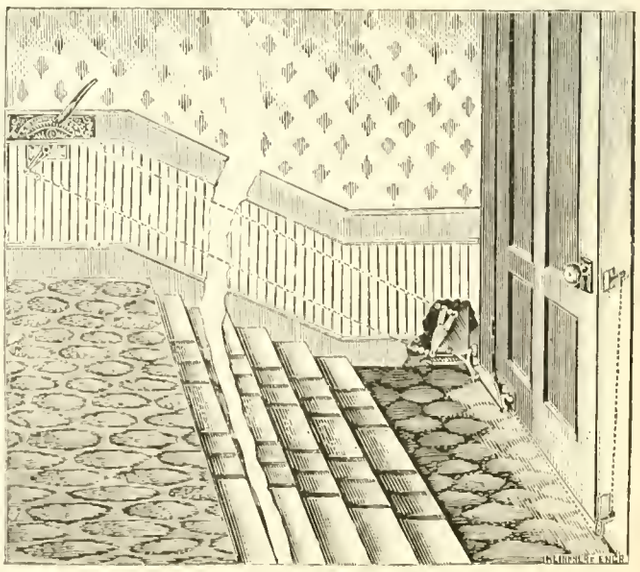

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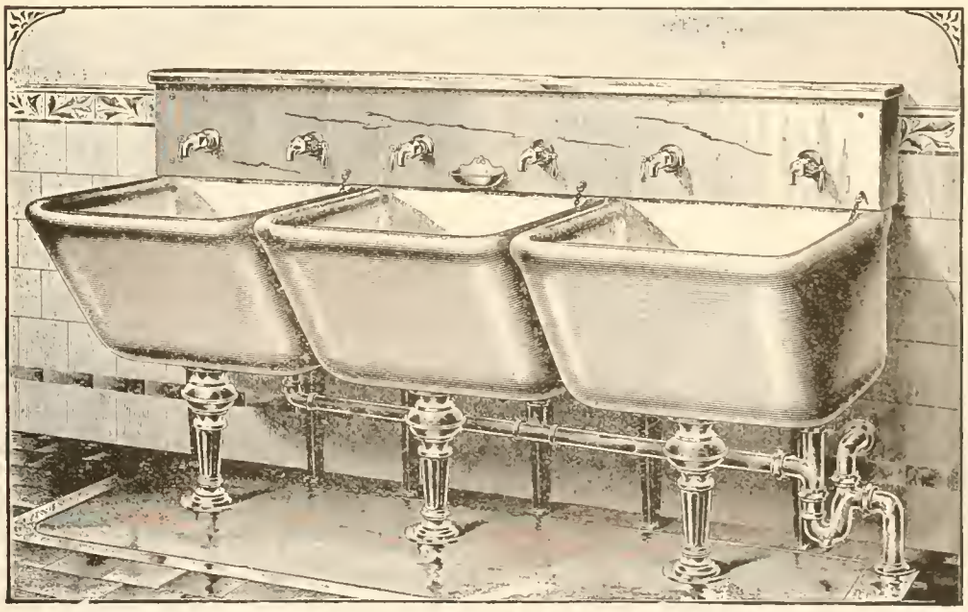

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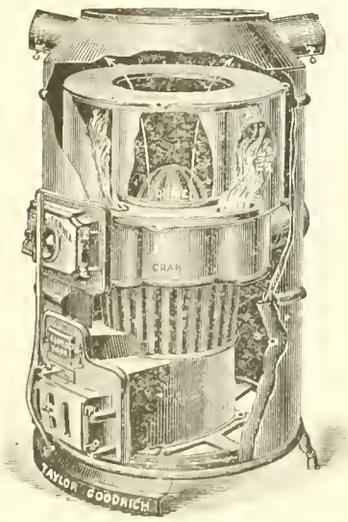

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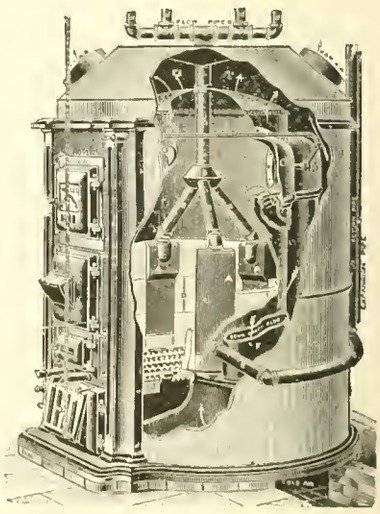

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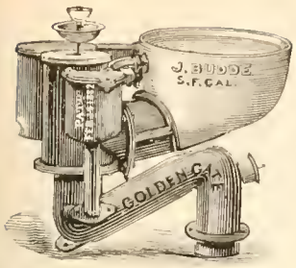

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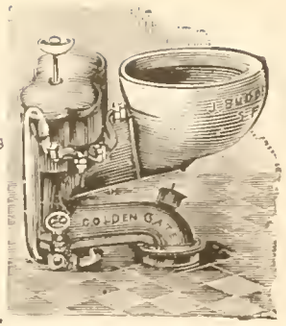

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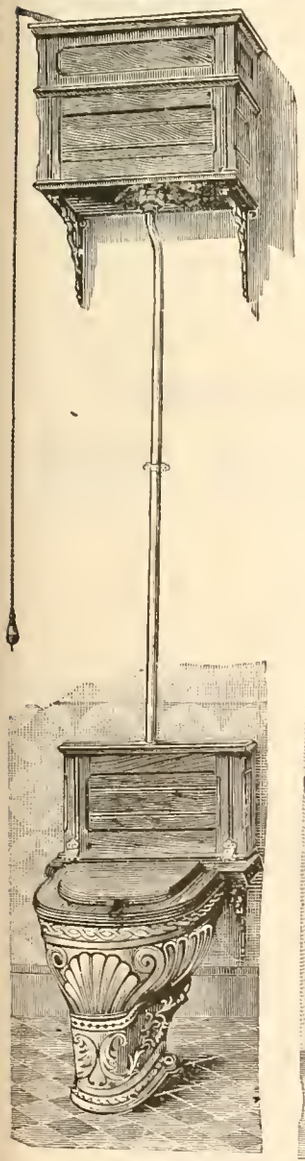

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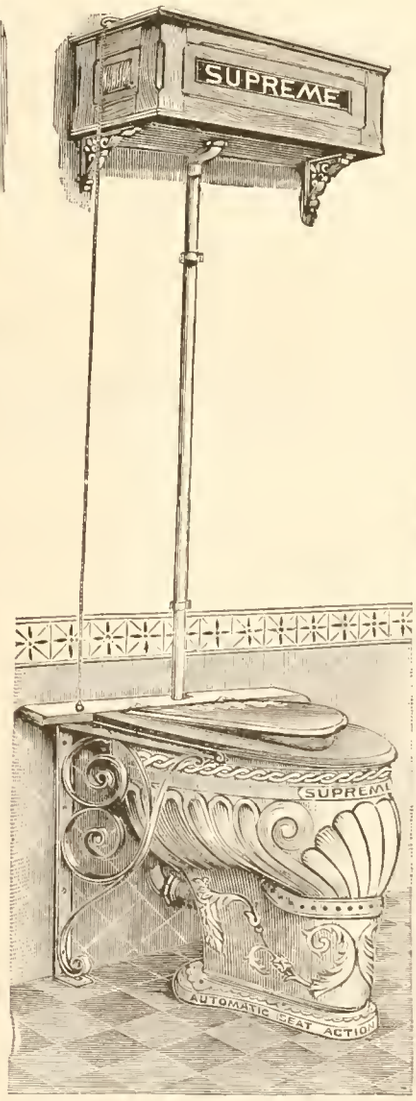

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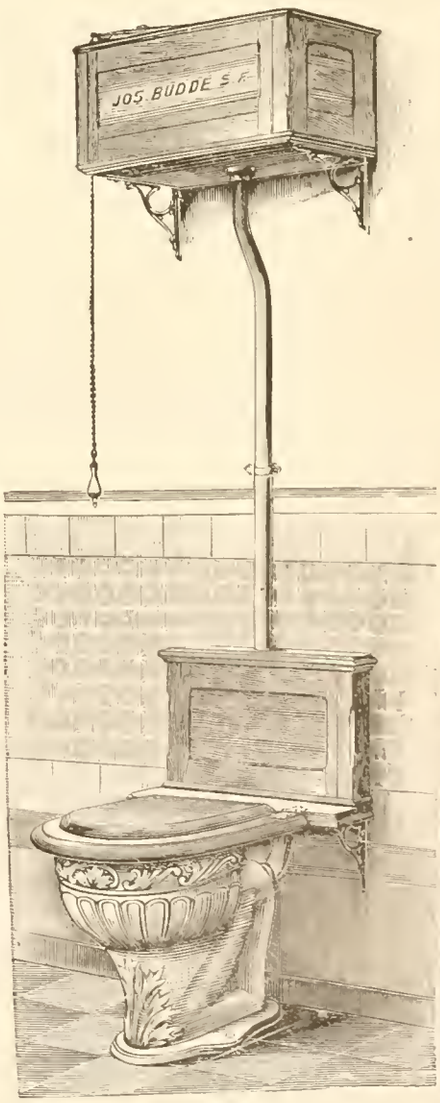

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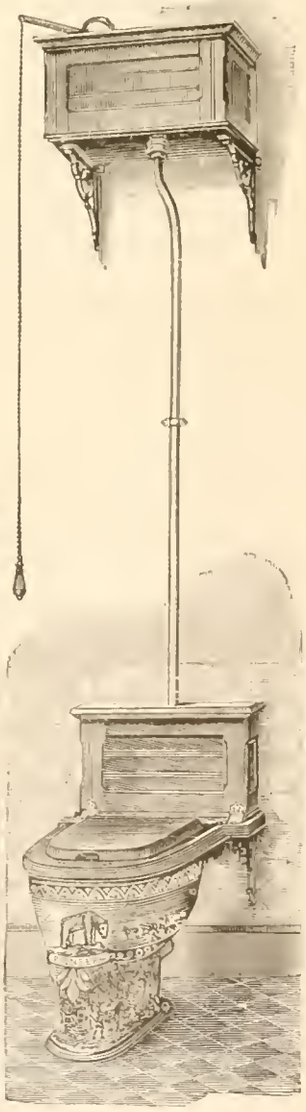

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THE general rebellion now going on in the United States against bad management of our municipal governments makes an account of what can be done by a practical economical people *apropos*, such an account is concluded in this number.

In the case of the Civic management of Glasgow we have the most practical application so far made of Socialistic principles to the government of a big city. Glasgow is a city of about 750,000 inhabitants the most populous city in Great Britain next to London, and is therefore the best exhibition of an advanced municipal government that we have on a large scale. Many valuable lessons may be learned from this example.

The care taken to prevent monopolies from getting possession of the peoples' property, is one. In this case the City of Glasgow had taken the precaution to simply lease the roadbed to the Street Car Company, thus keeping control of the streets, so that when the time mentioned in the lease twenty-three years, had expired and the Company refused to accede to reasonable terms for a re-lease, the City was able to resume control of the roadbed and rails and all it had to do was to supply cars and power, which was successfully done. In the United States the people have been far more liberal in giving away and have generally given franchises for fifty years for exclusive use of the streets, thus preventing themselves during their own generation from ever again getting control of these streets except by repudiation or by running elevated electric cars on tracks over the private company's tracks and thus by

competition with them bring them to sell back their franchises to the people.

In the purchase of the Gas and Lighting plants a practical way to do so is indicated by the article—although no doubt there are still better and more economical ways of procedure; the results however show that even by the system of Bonding as carried out by Glasgow, success has been attained; and the city management is a shining example as the price of gas has been lowered from $1.28 per 1000 cu. ft. to 62½ cents—and still it pays a good income to the city.

Thus we see that whenever a proper idea of the purpose for which they exist animates public bodies, they soon find some way to remedy evils. In the words of our author:

"The Corporation recognise three duties as being laid upon them: to fulfil their trust by economical administration of the city's finances: to improve public health, both physical and moral; and to give brightness and the possibility of happiness to civic life." . . . "Beyond that, the Glasgow Corporation hold it their duty to undertake the supply of these necessaries of life—light, fresh air and pure water—*which private enterprise cannot generally be trusted to provide.*"

The experience of most of American Cities go to verify the last sentence.

"It has in short been conclusively proved that municipal management of such a business as the supply of water is compatible with a direct saving of money to the consumer and a great improvement in the supply." . .

"The Corporation also provide lectures upon art and kindred subjects in the museum and galleries, and give a good concert every Saturday during the winter in the City Hall, at prices of 6 cts. and 2 cts ; and they make it pay. They are now building a People's Palace in the East end. There theory is that the way to stop drunkenness is to compete in attractiveness with saloons; and, whether it be true or not, they certainly do their best to carry it out."

It is interesting to see how a Corporation that has done such good work in such a short time is organized. We fine the whole business done by Committees of the Council, and the whole power is in the hands of the Council—who are responsible for all that goes on—this appears to us as it should be, have a proper representative Council elected by proportional system of voting, and make them responsible for *all* the business of the city, and have no outside commissions or appointed independent bodies—in short a public corporation modeled on the same plan that has made private corporations so successful.

Thus we find the cleansing of the streets is under the direct control of the Health Commmittee, and we find it efficiently done. The same committee has charge of sewage farms owned by the corporation which "indicate a promising field for the labor of the unemployed."

The civic feeling that is extant throughout our country at this time is encouraging—and when such feelings as those mentioned in the articles before us, "It is a sacred charge entrusted to us, and we must be neither swayed by party or party feelings, and by looking only to what is highest and best for the general welfare of the trusts committed to us, and how we may advance through our corporate work the prosperity of the City we love so well," shall have become more common than they are now, may we look forward to a genial revolution of city affairs tending to the general prosperity and well being of the citizens.

A SINGLE year of judicious advertising is often equal to a lifetime of hard work in the building of a business.

GLASGOW—A MODEL MUNICIPALITY.

(CONTINUED FROM MAY NUMBER.)

IT is worth pointing out that the late Tramway Company only paid a net rent of about £5,000 a year to the Corporation for the use of the streets, so that there is a direct gain in money as well as in efficiency. As an indication of the boon conferred by the introduction of halfpenny fares, I have been allowed to see a table of the average number of travellers in a typical week at the various rates. From this it appears that, in round numbers, 300,000 passengers paid ½d., 600,000 paid 1d., 95,000 paid 1½d., and only 20,000 paid the maximum fare of 2d.

It may be supposed that the next step will be to abolish all fares above the penny, a plan which will simplify book-keeping, and leave the conductor much more leisure to attend to his passengers than he has at present. It seems to an outsider that the sensible plan would be for the Company to use its omnibuses as friendly feeders to the cars in the outlying districts, instead of running them as rivals on parallel lines, at at present. In that case, this step might follow very shortly.

The capital of the Tramway Department is provided for in the usual way, by a sinking fund which, it is calculated, will pay off the debt in thirty-one years. Altogether, I think that this history of the Glasgow tramways may be strongly recommended to the notice of all Town and County Councils whom it may concern.

One may pass next from the locomotive to the stationary, from tramways to dwellings and lodging-houses. And one must admit that a very interesting part of the work of the Glasgow Corporation is that carried out under the name of the City Improvement Trust. This Trust was established in 1866, when the problems of "over-crowding" were clamant for treatment. Its object was "to let air, light, and, if possible, a little sunshine into the dismal closes and courts of the city, where not fewer than seventy-five thousand human beings were crowed together amid surroundings that had become moral and physical 'plague-spots,' a danger and disgrace to civilisation." During the twenty-eight years of its existence the Trust has spent nearly two millions sterling in the purchase of insanitary property and in building. At first it was thought that the citizens themselves would step in and build improved dwelling-houses upon ground cleared by the Trust. That hope was not fulfilled. Those who built went in for a very different style of edifice. In 1870 the Trust itself undertook the building of a small number of tenements of one and two roomed workmen's dwellings, at rents which ranged from £5 14s. to £9 15s. per annum. Further, they built a model lodging-house to provide for some of the lodgers turned out of the vanished slums. Each inmate of this lodging-house was provided with a separate cubicle and a good bed. Dining and sitting halls, with a kitchen and a shop for the use of the men, were placed on the ground floor. The price of a night's lodging was 3½d. or 4½d. The two hundred and ninety beds were so regularly in demand that the Trust went on to build seven such lodging-houses in all, six for men and one for women. The return for the ten years 1881–1891 was at the rate of nearly 5 per cent per annum upon the total outlay. As the Corporation were meantime borrowing

money at 3½ per cent or less, this was clearly a successful experiment in municipal building. But they hold here, as elsewhere, that their business is rather to stimulate private enterprise than to supersede it. One result of the establishment of the model lodging-houses is that the old style of cheap and nasty lodgings is practically extinct in Glasgow. Private enterprise has gone to work on Corporation lines, and the standard of comfort has been raised, by the simple operation of economic law, to that set by the Corporation. It should be added that the committee which manages the lodging-houses has for two years provided a free entertainment every Saturday night in each of them. These entertainments are extremely popular, and help to keep the lodgers out of the public houses.

The Corporation are at present engaged in the building of a Family Home, which is to do for widows and widowers with children what the lodging-houses have done for single men, in the way of raising the standard of comfort and the possibilities of life. In this building, which will provide one hundred and seventy-six dormitories, it is proposed to charge 8d. a night for a room large enough for a man or woman with not more than three children. The children will be fed and taken entirely in charge during the day, as it is expected, for 1s. 6d. a head per week. This, I believe, is an absolutely new experiment for a British municipality to try. If it pays its way, the example will be fruitful in advantage to a particularly unlucky class of the population.

The provision of workmen's dwellings has hitherto not been attempted on a large scale by the Trust. It has, however, built a few tenements, and is now building new ones to supply accommodations for about three hundred families, at rents from £7 5s. to £11 5s. But all this only provides for the wants of the better class of artisans, who can pay a comparatively high rent. Now plans have been approved for houses of one and two rooms, which conform to sanitary requirements, and can be built and let with profit at a rent of £4 10s. to £5 a year for one room, £7 10s. to £8 for two. When the Corporation working at the city's risk, have shown the possibility of making such a building pay, the further erection of similar tenements will be left to private enterprise, as in the case of lodging-houses. A very important class, that of labourers earning less than 20s. a week, will thus at last be provided with the healthy and cheap houses that all practical philanthropists have so long desiderated.

But a work man's leisure is not to be wholly spent in even the most healthy of homes. He and his family need recreation. The Glasgow Corporation have therefore always taken a keen interest in the brightening of civic life. Stong in "the power of multiplied penny," they have endowed their city with museums, half-a-dozed parks, and a really good art gallery. It is significant of their attitude that one of the reasons put forward for the taking over of the tramways was that additional facilities for getting out to the parks might be put in the way of the poorest citizens. In the same way, I learn that a weir is to be built across the Clyde for the double purpose of preventing the ascent of sewage from the lower reaches and of deepening the river so as to allow of boating above the weir. The Corporation also provide lectures upon art and kindred subjects in the museum and galleries, and give a good concert every Saturday during the winter in the City Hall, at prices of 3d. and 1d.; and they make it pay. They are now building a People's Palace in the east end. Their theory is that the way to stop drunkenness is to compete in attractiveness with the public-house; and whether it be true or not, they certainly do their best to carry it out. More important still, perhaps, is the fact that they are providing playgrounds for children in the congested parts of the city, where gymnastic apparatus and games of all kinds are at the disposal of every child in the neighbourhood. Without doubt all this provision of means for recreation makes the health of the citizens. Let us see what else is done to that end.

The sanitary system of Glasgow is as justly famous as the name of Dr. J. B. Russell, the veteran Medical Officer, under whose direction it has all practically grown up. Sanitation, it has been said, generally has its root in selfishness. Thus the origin of the Glasgow Sanitary Department in 1863 can be traced to the fear felt by the epidemics of typhus and cholera that ravaged the city from 1848 onwards. The organization which now wages the continual battle against disease is at once simple and efficient, as the deputations that continually come from other towns to investigate it know.

The Medical Officer and his lieutenant, the Sanitary Inspector, are the heads of a little army of inspectors who are always acting as spies in the enemy's country. First come the epidemic inspectors, whose task has been a comparatively light one since the Notification Act was put in force. Every person attacked by infectious disease is treated, at least in theory, as a danger to the community. He is taken off compulsorily to the Corporation hospital, unless he can show that he will be properly isolated at home. There was a time when the sanitary officials were looked upon with doubt, and it was often necessary to get a warrant to remove a patient from the poorer districts. It is still so in some towns where the plan of using the police as sanitary inspectors is adopted. Dr. Russell has steadily set his face against this practice, and the result of his wise rule is that the people now have absolute confidence in "the sanitary men," who are allowed to go freely where neither police nor even missionaries may penetrate. Further, the community have recognised that if they insist on taking a man to a hospital for their own sake rather than for his, it is only fair that his stay there should be made as enjoyable as possible. The consequence is that the average Glasgow labourer now regards hospitals in much the same light as Maggy in *Little Dorrit*, who was occustomed to say, "Such beds there is there! such lemonades! such oranges! such d'licious broth and wine! such chicking! Oh, AIN'T it a delightful place to go and stop at!"

A second staff of inspectors are engaged in detecting nuisances. A third staff, again, look out for cases of overcrowding. Any house not exceeding 2,000 cubic feet in total capacity and suspected of offending in this respect may be "ticketed," as the phrase is; that is, marked outside with the maximum number of persons that may be safely allowed to sleep in it. The inspectors have authority to enter any ticketed house at any time, and so check the overcrowding which is fruitful in disease among the very poor. In very bad cases of insanitary conditions a house can be closed althougher. Here as in regard to epidemics, the motto of the department is "Prevention is better than cure."

The supervision of workshops, dairies, etc., and the administration of the Shop Hours Act are also in the hands of the Sanitary Department. One result of this is that there is no dairy in the city in communication with a sleeping or dwelling-room.

The Department employs six female inspectors, whose

duty is to act as sanitary missionaries. They go about widely among the poorer classes, and hold informal talks on sanitary questions with the women of each neighbourhood. These ladies can gain confidence and advice on delicate matters in which "man, proud man," would find himself quite powerless.

The cleansing of the two hundred miles or so of Glasgow streets has also been placed under the control of the Health Committee, since it was found that cleansing and the prevention of cholera go hand an hand. Much time and friction are thus saved, and the work is efficiently done at a moderate cost. The business of sewage purification is also attached to the Sanitary Department. For many years the four condition of "that navigable river, the Clyde" (as one of their own poets has said), has been a disgrace to Glasgow. Works have recently been brought into operation for dealing with one-fifth of the total sewage of the city. At present their effluent into the Clyde is as clear as Loch Katrine water itself, and has no smell. The process will speedily be extended to the rest of the sewage, and the day may not be far distant when salmon will again be caught at Glasgow Bridge. The solid product of the sewage is in part sold to farmers and in part used on the Corporation's own farms. One farm, which was originally leased as moss-land worth 1s. per annum per acre, is now valued at 30s. per annum. This indicates a promising field for the labour of the "unemployed," for whom the Corporation have been forced to find work in more than one of the severe winters of recent years.

No account of the Sanitary Department of Glasgow would be complete which did not allude to the public baths and wash-houses, though these are nominally under different control. Glasgow believes in soap and water. At present there are five public boths and wash-houses in her thickly populated districts. It is felt that this number is inadequate. Experience shows that the average house-wife, though she is glad to take advantage of a wash-house, will not carry her dirty cloths more than half-a-mile. Thus the five wash-houses now existing are used by only about 3,000 women in a year, each of whom goes once a week, and can do her week's washing for 5d. But there is need of many more wash-houses, and it is hoped that in time there will be one at each corner of every square mile in the city, so that few women will need to go more than half-a-mile to their week's washing. The baths and wash houses have not as yet paid their way. There is a small annual deficit to be met by assessments. It is worthy of note that the Corporation have opened the baths free at certain hours to children attending the board schools of the city. The teaching of swimming has thus been greatly encouraged.

But what one may here ask, does Glasgow pay for all these good things? It is obviously impossible to go into matters of finance, except in the most general manner. The first question is naturally that of rating. The municipal rates, covering all the departments that have been mentioned, and much more that must be taken for granted, are given, as they were in 1874–75 and as they are in the present year, in the following table:—

Year	Rate per £ on rental of £10 and upwards.	Rate per £ on rental under £10.
1874–75	3s. 0¼d.	2s. 3¼d.
1891–95	2s. 8¼d.	2s. 1 9-32d.

A rate of a penny in the pound now produces about £15,000.

In the same period the price of gas has been lowered from 5s. 3½d. per thousand cubic feet to 2s. 6d. These figures show that in spite of the increase of the population and the doubling of the area of the City of Glasgow between 1874 and to-day, the rates have decreased all around, whilst the service is substantially improved.

A typical instance of the financial methods which have allowed this to be the case is to be found in the erection of the present municipal buildings. Glasgow's stately and even magnificent *Hotel de Ville* cost something over half a million sterling. A penny in the pound had been added to the assessments in 1868 to pay for the old City Chambers. This was not thereafter taken off. It is sufficient, with the rent contributed by the departments, equal to about ½d. in the pound on the rates, to pay the interest on the cost of the new buildings, their maintenance, and the Sinking Fund. This will pay off the entire debt of over half a million in fifty-six years, when the buildings will be the unencumbered property of the city.

If I were asked, indeed, to state the distinctive feature of Glasgow finance, I should suggest the Sinking Fund. That useful invention is now applied to every enterprise of the Second City. On examining the municipal accounts, one finds that all serious debts are on the way to be cleared off by the automatic operation of this device. Thus the Loan Debt of the Police Commission, amounting to nearly £1,300,000, will be paid off in less than fifty years, four-fifths of it being paid within twenty years. The water and gas debts will be paid, the one in sixty-seven years, the other in forty, without any new call upon the ratepayer. The debt on the parks and galleries will be paid off in forty years, and that on the tramways in thirty-one years.

The present financial position of Glasgow seems, to an outsider, extremely satisfactory. Roughly, one may estimate that her liabilities are eight millions sterling and her assets ten and a half millions, with a clear balance of two and a half millions sterling on the right side of the account. It is clear that, with all her Sinking Funds at work, Glasgow is on the high road to riches beyond the dreams of even municipal avarice. Whatever experiments in municipal collectivism her Council may desire to undertake in the future are at least not likely to be hampered for want of funds, or to fail through lack of business capacity.

Before I finish this sketch of some features of municipal Glasgow, I should like to draw attention to one subject of special interest for Londoners at present, upon which Glasgow may throw some light. It is generally felt by the citizens, as well as the Corporation that the City of Glasgow, covering as it does, since the extension of the boundary in 1891, almost 12,000 acres, with a population of upwards of 700,000, is tending to outgrow its unity. General municipal *esprit de corps* needs to be fostered in the several districts now knit into one city. At the same time it is strongly felt that only a central authority can deal effectively with such questions as those of sanitation, sewage, police, fire, and so on. A re-arrangement of the wards of the city will be called for next year, and it is highly probable that some scheme of Divisional Committees will then be adopted, without any weakening of the central authority. By the courtesy of a member of the Corporation I am enabled to give the gist of such a scheme, which he has drawn up for submission to the Council. It seems almost certain that this scheme, or something very similar, will be ultimately adopted. The Unification Commission might do worse than consider carefully its provisions, which begin as follows:—

"The object of any scheme of divisional administration should be: (1) To keep alive municipal interest in all parts

of the city by providing some machinery, other than that of the central body, by which local wants and necessities could be ascertained and supplied; and by which local feeling would find more full and complete expression; (2) To relieve the central administratice machine of certain details by having a first process of selection and preparation of business, which would leave the central body more free to deal with the matured recommendations of the district, and with all questions of principal and general policy.

"Any scheme of divisional administration to be successful must comply with the following conditions:—

"(A) The central control over the various departments must be maintained, so that consistency and uniformity of policy and action may be kept throughout the whole territory.

(B) Income and expenditure and the employment of officers of every degree in all branches of the service must rest with the central body.

"(C) The representatives composing the divisional bodies must all be members of the Central Council.

"(D) The power to regulate, diminish, or increase the powers and duties of the Divisional Boards from time to time, as experience and utility suggest, must rest entirely with the Central Council."

The scheme then goes on to propose that Glasgow should for this purpose be divided into five sections, "so as to give the nearest effect to natural geographical groups that the limits of the wards will permit." A Divisional Board is to be formed in each section, of the members elected by the wards contained in it, with others if necessary; the Lord Provost, and the Conveners and Sub-Conveners of the Committees of Watching and Lighting, Statute Labour and Health, to be *ex-officio* members of each board. The minutes of each board-meeting are to be communicated to the next meeting of the Central Council, and, if not disapproved thereon become resolutions of the Council. Provision is made for holding at the disposal of each board of the services of officers from the chief administrative departments, especially acquainied with the territory of the board. The The remaining provisions are as follows:—

"8th. The work of the Board would be to receive, consider, and deal with remits from the Central Council, or any of the standing or special committees thereof, to receive and consider complaints or suggestions from the ratepayers in the districts relating to the public service, to inquire into these, and discuss or make recommendations, and to discuss and mature any improvements or changes in the service of the various departments for recommendation to the Central Council through their standing committees; to report on the requirements of the district previous to the preparation of the annual estimates, and to take a special oversight of the repair and upkeep of streets and sewers, the cleansing and lighting of streets, the removal of refuse, the placing of fireplugs, etc., and the inspection of nuisances within their districts.

"9th. For the proper regulation of the business of the Divisional Boards, Standing Orders should be drawn up by the City Council, providing *inter alia* for a direct appeal to the Council, on the request of two-thirds of the members of the Board present at any meeting, against any decision or recommendation of any Central Standing Committee affecting any Divisional Board.

"10th. It is suggested that the business of the Local Boards should be carried on at some conveniently accessible point in each district, and that, to give outward and visible embodiment to local municipal life, there should be established a Municipal Bureau or district Office, where all possible municipal business would be concentrated (such as collection of gas and water accounts, municipal assessments, etc.,) and where information, advice, and assistance could be at once obtained in reference to epidemic disease, hospitals, and the sanitary service generally, cleansing roads, drains and sewers, lighting, fire, police, gas, water, and indeed every department of the public service which affects the health, comfort, or convenience of the citizens."

The only comment I shall add is that the combined safety and elasticity of this scheme seem to me to be strongly in contrast to the rigid and risky proposal to which Mr. Chamberlain recently saw fit to give the weight of his great authority.

It is hardly necessary for me to point out, in conclusion, that I have of necessity forborne to deal with much that is important in the municipal life of Glasgow. Upon the work of the police and the fire brigade, the Dean of Guild, who supervises building, the profitable Markets Trust, with its control of the meat market and slaughter-houses, and many other parts of the Corporation's business, I have no space to touch. Otherwise I should like to glance at the principle recognised by the Corporation, to do their own work by direct employment of labour in certain cases, such as in the repair and cleansing of the streets, but to employ contractors in other cases, as in bridge-building and street-making. I should especially like to call attention to the grim irony of circumstance which causes a city, so advanced in other respects, to be about the last in the country to offer its citizens a Free Library, and makes a Council, who play lightly with millions when it is a question of material boons, shrink from asking their constituents for a penny in the pound when it is only books that are needed. Probably they have delayed thus long only in order to acknowledge, by one frailty, that they too are human; but an outsider may assure them that they will provoke no envy of the gods if they can make up their minds to force this crowning benefit upon their citizens.

It is true that the Glasgow Corporation have lately been accused of an over-readiness to "force benefits upon their citizens." But the principal Police Clauses of their Bill now before Parliament, of which facetious members have made their sport, have been the public law of Scotland since 1892, and are now merely being adopted by Glasgow. The facetious gentlemen are, therefore, surely a little late.

But I must turn to consider the lessons that Glasgow has to offer the rest of the country, for I think I have justified my title. That, indeed, is a business that the gentle reader can do best himself, if I have been at all successful in my transcript from life. I wish to offer him only two suggestions.

The first is that Glasgow is an instance of the striking progress which may be achieved in municipal matters by a body of good business men who are more concerned about the welfare of the city than the illustration of a political or social theory. Politics, indeed, are practically unknown at the Glasgow Council Board. Nor is eloquent speech in great demand there. The real work is, all of it, done in committees and small sub-committees, and the discussions at the meetings of council are, I understand, chiefly useful to let outsiders know what is going on. Glasgow, again, is claimed by many as a wonderful example of the success of municipal socialism. That may be so, but the Council certainly had so such idea in their heads when they achieved their successes. The method of the Glasgow Corporation, who have done their work solely on the principal of finding the best thing for the citizens in each matter, may be profitably contrasted with that of bodies which begin by enunciating a political or social theory, and then spend so much energy in arguing over it, that they have none left for applying it. Municipal collectivism may have achieved great things in Glasgow, but her Councillors have been col-

lectivists—as M. Jourdain talked prose—without knowing it, or at least without caring about it:

"Like some tall palm the mystic fabric spring."

In the second place, it is gratifying to note how completely the Glasgow Corporation has fulfilled the conditions deduced by Mr. Chamberlain from his Birmingham experience.

"The municipality is ever present; it is the active centre of all public life of the town; its members are perpetually striving strenuously to promote the good, the happiness, and welfare of the whole population. . . . The City Council are the directors of a great co-operative undertaking, in which every citizen is a shareholder, and the dividens are payable in the better health, in the increased comfort, in the recreation, and in the happiness of the whole population."

This is surely a higher conception of the duty of a corporation than those have formed who attempt to bolster up a political or social theory by their municipal practice. It agrees with that of the Lord Provost of Glasgow, who says, for himself and those who share his authority:—

"It is a sacred charge entrusted to us, and we must neither be swayed by party nor party feeling, ... looking only to what is highest and best for the general welfare of the trusts committed to us, and how we may advance through our corporate work the prosperity of the city we love so well.

When that is the temper in which our municipal affairs are administered, there is no need to wonder that Glasgow is a model municipality, and has traveled a measurable distance on the road to become "the ideal city, in which a pleasant and healthy home is within the reach of every citizen."—*Garret Fisher in The Fortnightly Review.*

STEEL BUILDINGS.

THE advantages of this method of construction over any other is well exemplified in the case of the Carter building, says the *Boston Commercial Bulletin.* It is stated with authority that the space saved over the old method is worth in rent about $12,000 per annum. Where land is very expensive or where lots are small the steel structure is particularly practical as it permits the saving of considerable interior space is always a matter of great importance.

In the modern steel structures masonry counts for very little, as the weight of the building is borne by columns. Such is the importance of the steel work that goes into these buildings that the greatest care is taken in its manufacture. The best architects and knowing builders see that every piece of steel is carefully tested and if not up to the standard it is thrown aside. The method of testing is a most severe one. The experts are hired and controlled generally by the architect at the cost of those who put up the building; the expert is stationed at the mill. Of such a nature is the work that two concerns in Pittsburgh are making a specialty of furnishing experts to supervise it and are doing the principal work of this character in the country.

It is required of these experts that they thoroughly test each piece of iron and steel made in the mill, or in other words, physical tests are made of each melt. The test specimens should fill the following requirements: Ultimate tensile strength, from 60,000 to 68,000 pounds per square inch; elastic limit, minimum, 35,000 pounds per square inch; elongation in 8 inches, minimum, 25 per cent; reduction in area, minimum, 40 per cent. In the bending test it is necessary that the iron or steel bend 180 degrees flat around a curve whose diameter equals the thickness of the specimens without a sign of a crack on the convex side. These tests alone signify the high standard of the material used, and when one considers how slender the modern steel frames are that hold up our buildings, the reason for this care can be easily understood. An expert also sees to it that properly marked pieces are put into the buildings, and those without proper marks are thrown aside. These experts are paid so much per ton, and make report to architects. Great care is taked that steel does not contain more than 1-10 of one per cent of phosphorus.

In steel frame construction the skeleton of the building is generally erected first, before the masonry is started. Under the old method the iron and masonry were used together in the building of each story. Where bolts were used largely in the last mentioned form, the steel sections are riveted almost wholly in the first. A steel thus riveted can be compared to an inverted bridge, for in fact the modern building is built on the bridge plan, and it is rivited in such a manner as to make it, to all intents and purposes, one piece of steel from top to bottom. Thus any strain which may be put upon the building will be shared by the structure as a whole and not confined to any one spot, as in the ordinary building.

ILLVSTRATIONS:

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

BUSINESS Building for H. J. Meyer, 931 and 933 Market street, Edw. Kollofrath, Architect.

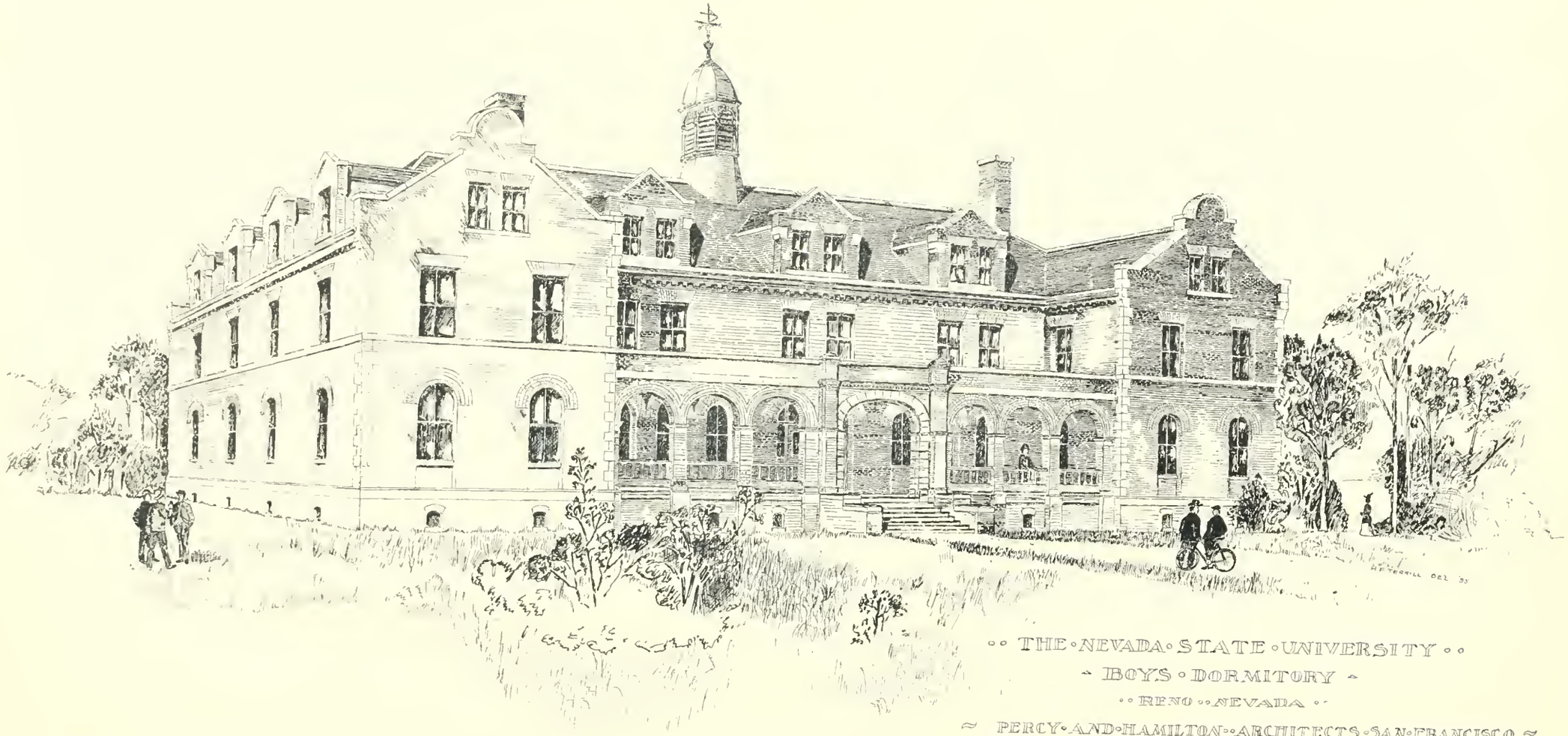
COTTAGE and plans, Newsom Bros., Architects.

BOY'S Dormitory, Nevada State University, Reno, Nevada, Percy & Hamilton, Architects.

Chase (to dentist)—"I won't pay anything extra for gas. Just yank the tooth out even if it does hurt a little." DENTIST—"I must say you are very plucky. Just let me see the tooth." CHASE—"Oh, I haven't got any toothache; its Mrs. Chase. She'll be here in a minute."—*Truth.*

Old DE WHISKERS "I have had my life insured for $50,000 in your favor. Is there anything else I can do to please you?" MRS. DE WHISKERS (his young wife)—"Nothing on earth, dear."—*Leslie's Weekly.*

BANCROFT LIBRARY



THE NEVADA STATE UNIVERSITY
BOYS DORMITORY
RENO NEVADA
PERCY AND HAMILTON ARCHITECTS SAN FRANCISCO

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO LITH

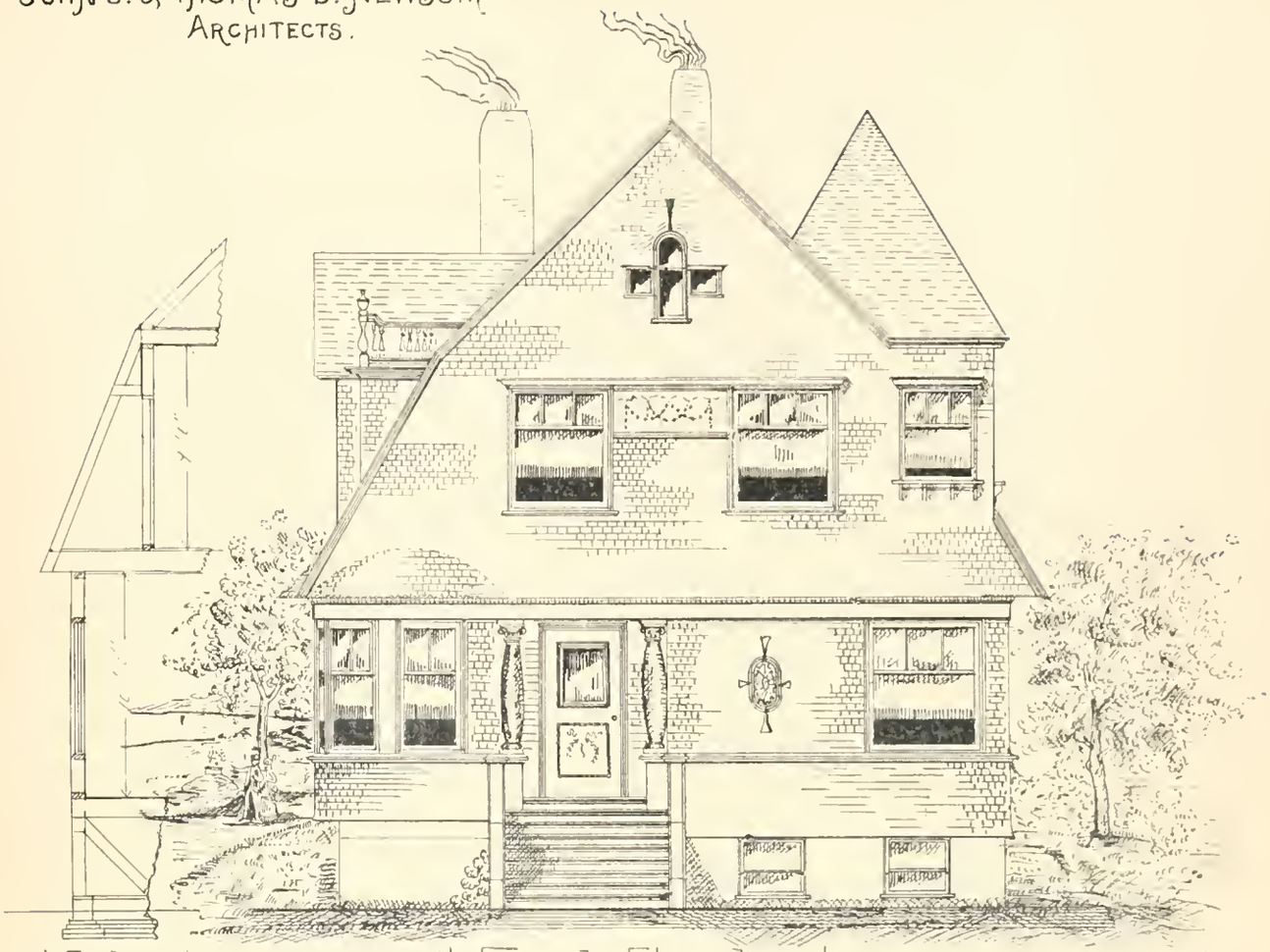
VOL. XVI Nº 6 JUNE 1895

BUSINESS BUILDING
for
H. J. MEYER, ESQ.
931-933 MARKET ST. S.F.
EDM. KOLLOFRATH,
ARCHITECT.

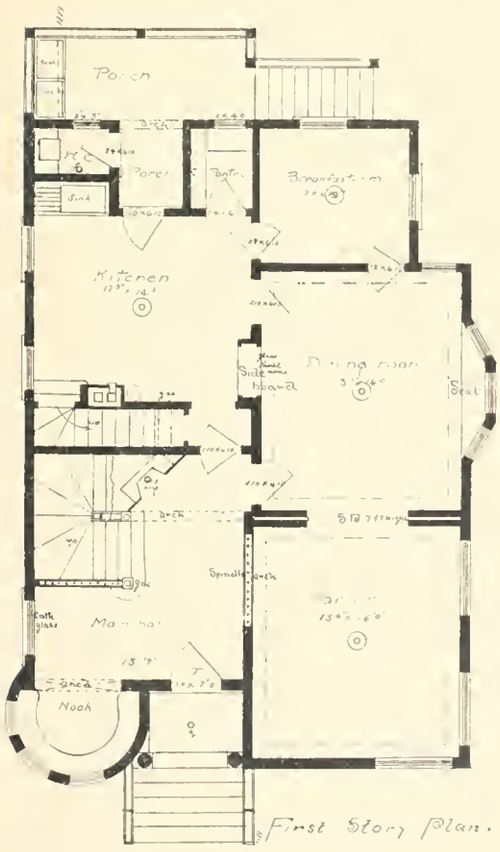
BRITTON & REY PHOTO. LITH.

TAYLOR COL. AUG. 1942

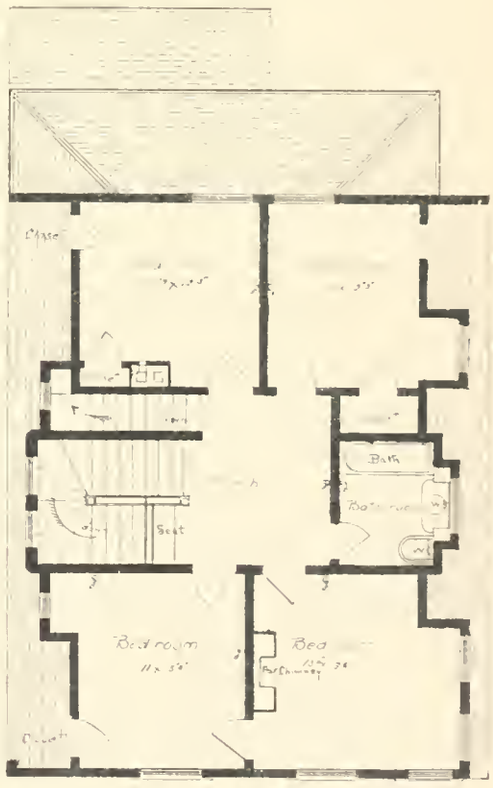
JOHN J. & THOMAS D. NEWSOM
ARCHITECTS.



Section — Front Elevation — Scale 1/4" = 1 inch



First Story Plan.



Second Story Plan.
Scale 1/4" = 1 inch

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street
Seth Babson, Pres. Geo W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

BOOKS AND PERIODICALS.

SAN FRANCISCO BAY AND VICINITY—We are indebted to the Union Photo Engraving Company for a handsome map, published by the above company. We understand this map was modeled in clay, and is certainly a very creditable work that should adorn the walls of every business office in the city.

KIDDER'S ARCHITECTS and BUILDERS POCKET BOOK, published by John Wiley Sons, 53 East 10th street, New York, price $4.00. We know this is considered a valuable book by some one, as it was stolen from our letter box before it reached our desk.

THE FORTNIGHTLY REVIEW for June contains an interesting sketch of "Mr. Chamberlain's Municipal Career." Mr. Chamberlain, at present a member of Parliment from Birmingham, twenty years ago was Mayor of that city, when after much opposition his plan for the requirement of the gas works by the city corporation, as afterwards the water supply of the city, which proved a great benefit; both these projects proving a great success and giving a large revenue to the city, at the same time reducing the cost to the company about one-third in the cost of gas, while double the supply of water was furnished.

THE BROCHURE SERIES OF ARCHITECTURAL ILLUSTRATION. Published by Bates & Guild, 6 Beacon street, Boston, Mass. The Brochure Series in its present form is a continuation of the little occasional circular of the same name already well known to the architects of the country. The favor with which these were reviewed has induced the publishers to establish a regular monthly publication at the low price of fifty cents a year. In regard to the illustrations what the publishers claim is true, viz: "Photographs of the size here given cost from fifteen to fifty cents each . . but in the present form they cost but one-half cent each and for all practical purposes are quite as valuable as the originals."

We take pleasure in presenting our readers an illustration from MODERN OPERA HOUSES AND THEATRES, a work about to be published in London by Edwin O. Sachs, Architect F. S. S. and A. E. Woodrow, Architect A. R. I. B. A., Waterloo Place Pall Mall, S. W. Illustrated by a series of 220 plates from drawings prepared for the work. The design below is the entrance to "D'Oyly Cartes Opera House."

ENTRANCE TO D'OYLY CARTES OPERA HOUSE.

POINTS IN THE INSPECTION OF ELECTRIC PLANTS.

IN a recent paper on points in the inspection of electric plants, read before the Fire Underwriters' Association of the Pacific, Mr. G. P. Low made a number of excellent suggestions. One of his most pertinent remarks was the following: The greatest enemy to safety in wiring is moisture, and the only flexible and durable material having high insulating qualities that will withstand moisture is rubber, or the compounds allied to it. These should be used exclusively for the insulation of all inside wiring, despite their inflammability. Wires should never be permitted to touch anything save their insulating supports: hence it follows that insulating tubes or bushings must be used wherever wires pass through walls, floors or partitions of any description. The hazard of wood base cutouts, switches, etc., is so well understood, that there is no occasion for making further effort to show the necessity for invariably ordering their immediate removal.—*Architects' Electrical Bulletin.*

THE DISPOSAL OF DUST.

HITHERTO the disposal of house dust and general refuse has been a matter involving considerable difficulty for municipalities, and always, even under the most favorable circumstances, one of the most costly items presented to the ratepayers in the parish bill. Thanks, however, to the public spirit displayed by the majority of the members of the St. Pancras vestry, says *Lloyd's*, and the skill of their engineer and chief surveyor, Mr. W. Nisbet Blair, the difficulty has been conquered, and this great metropolitan parish is about to show, not only how to get rid of its refuse at the lowest possible cost, but how to make the heretofore despised waste of commercial utility. Two years ago it was seen that the success attending the establishment of the parochial electric lighting works would necessitate an early enlargement of the scheme, and it was then that Mr. Blair proposed to the electrical engineer, Professor Henry Robinson, a plan for burning refuse in special destructors and utilising the heat for the generation of the power required. Together the two gentlemen formulated a complete scheme, and laid it before the vestry, which for a long time refused to be convinced that it was feasible, but at length perceived its advantages, and having adopted it pushed on the work, which is now rapidly approaching completion.

The buildings cover an area of about two and a-half acres, running from Georgiana street to Pratt street at the back of Great College street, and facing the King's road. Their most conspicuous feature is the great chimney built by Messrs. Kelly Bros., of Liverpool, and stated to be one of the most perfect pieces of work in the kingdom. This gigantic shaft, octagonal in shape, and faced with ornamental lines of rost-red Ruabon brick, rises from a bed of concrete eight feet thick, and twelve yards square, to a hight of 231 feet, its altitude from the ground level being 207ft. 6in. At the base the brickwork has a thickness of five feet, and this is gradually reduced until immediately below the stone cap it is only 14 inches. The caps weighs no less than 32 tons 11 cwt., and the total weight of the whole shaft is 2,680 tons. A lining of fire-brick goes to a height of 78 feet, and between it and the main shaft is a three-inch cavity, to prevent the outer brickwork suffering damage by heat. When plumbed it was found to be less than a quarter of an inch out of the true perpendicular, an accuracy so rare as to be phenomenal. The cost of erection was 3,400*l*. The rest of the work has also been carried out in the same thorough fashion, and its details are full of novelty and interest. The refuse will be taken in through an entrance in Georgiana street, and there weighed and tipped into enormous tanks on each side of the main shed. To these tanks are attached hoppers, which convey the dust to furnaces underneath specially constructed to Mr. Blair's design, and regarded as the most approved type in existence.

The great feature of the whole scheme is its general automatic power, which enables it to deal with an enormous amount of matter, while necessitating but very little manual labour in proportion. This feature is specially exhibited in the furnaces, which are fitted with most ingenious appliances, the patent of Mr. Healey, an engineer, of 24 Queen Victoria street. The dust falls from the hoppers on to bars, arranged somewhat in the form of an enormous gridiron. Alternate bars move continuously up and down with an eccentric forward motion, carrying the refuse to the centre of the furnace. This motion is obtained by means of a special engine, the boiler of which is heated by the fumes of the burning dust which thus assists its own destruction. The same boiler also drives the blowing machinery, by which the draught is obtained to ensure combustion, a mortar mill, and a stone-breaking machine. There are eighteen furnaces in all, capable of consuming 1,260 tons of refuse per week, and leaving behind only a certain amount of "clinker," which is withdrawn every six hours, and which, owing to its properties of making an exceptionally tenacious mortar, will fetch by sale something like 1,000*l*. per anum. In the electric light department, which has been arranged by Prof. Robinson, there are at present three boilers—though provision has been made for six to meet future contingencies—which are heated by the destructors. The fiery gases from the burning refuse pass through a flue—the longest section of which is 60 feet—to the boiler-room, round the outer shell of the boilers, descending again to the main flue, then to the front of the boilers, through a heat economisers, and into the chimney. It is calculated that the destructors will produce 12,000 degrees of heat, giving from three to four hundred horse-power with the three boilers. A novel arrangement of balanced dampers governing the various flues enables the heating fumes from the furnaces to be turned off or on to any portion of the works, or sent direct to the chimney shaft by the mere turn of a lever. Much smoke will also be avoided by combustion chambers above each furnace, which becoming white hot, will destroy all sooty particles in the vapours before they pass into the flues. In case extra pressure should be put upon the lighting department the boilers have been so arranged that they may also be fired by hand or mechanical stokers with coal, so that steam may be quickly raised to meet any emergency. The present plant is designed to serve 10,000 lamps.

"Efficiency with economy" seems to be the motto of the designers of this great enterprise, and on every hand are arrangements for securing it. For instance, water which is supplied by meter to the works might have proved a serious item of expenditure, but is ingeniously prevented from becoming so. The waste steam from the boilers passes through a condenser and then through a water-softening apparatus to a vast tank below, which has a holding capacity of 115,000 gallons. The water at the top of the tank attains to a heat of about 110 degrees, and this is pumped up to a cooling apparatus at the top of the building, whence it returns and re-enters the tank at the bottom, thus being used over and over again.

At present the vestry pays 3s. 6d. per ton for the cartage of its refuse away. On this item of cartage alone there will at once be a saving of a shilling per ton, which, with the revenue derived from the sale of the "clinker" mortar, will show a total saving to the parish of close upon 5,000*l*. per annum. There will also be a great saving in coal at the Stanhope street Electric station, as the new station will switch on and take the entire dayload by means of the destructors alone. What this means will at once be apparent when it is stated that the Stanhope street plant already returns a profit of six per cent upon the original outlay of 100,000*l*., while the ratepayers have the advantage of better street lighting, the possession of a valuable asset, and the satisfaction of knowing that they have not had to pay a farthing for it. And better things are in prospect with the inauguration of this new scheme. The possibilities of the use of refuse as fuel are endless, and the initiative may be followed by results as valuable and amazing in the case of "dust" as they have been in that of the once equally despised coal tar. Nothing can exceed the energy with which the scheme has been forwarded—Mr. Blair and Professor Robinson carefully overseeing the carrying out of the designs for which they are responsible in their several departments with the assistance of an able lieutenant in the person of Mr. G. A. Ellt, the clerk of the works.

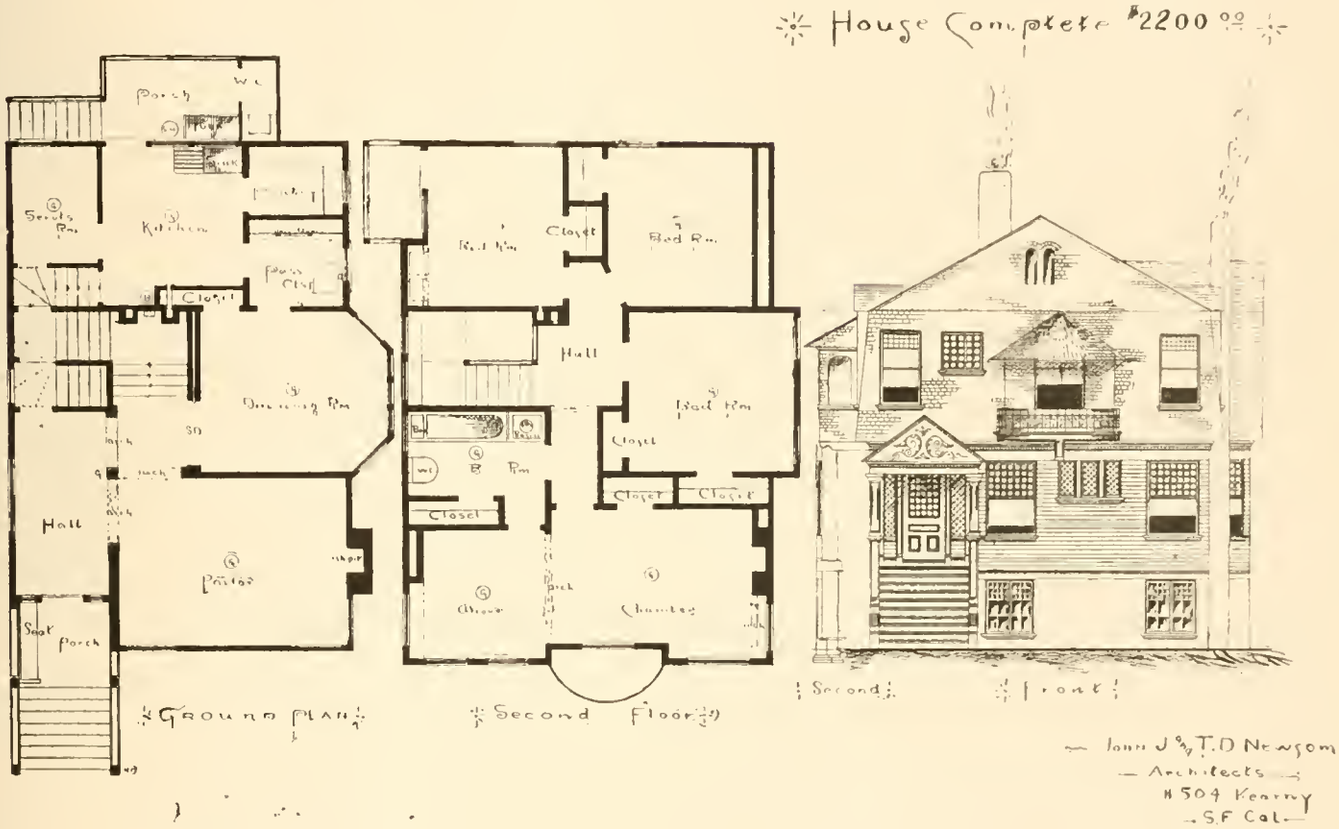
LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

PAYMENT OF CONTRACTOR BY CHECK.—Where parties upon being sued by a contractor alleged that they had given him a check in full payment of all claims under the contract, and a statement to that effect appeared on the face of the check; but the contractor denied that he had so accepted the check, and testified that the one who gave it to him told him that he would receive a further payment, and that the supervising architect advised its acceptance, saying that they would pay him in full afterwards, and this was corroborated by the architect, the Supreme Court of Washington held that the question of whether the check was given and accepted as full satisfaction was for the jury to determine.
Megrath v. Gilmore, 39 Pacific Reporter, 131.

contract which is not in writing, the petition to enforce his lien need not set out in detail the material furnished and the work performed.
Texas State Fair Ass'n v. Caruthers, Court Civ. App. Tex. 29 S. W. Reporter, 48.

ORDER BY CONTRACTOR AND MECHANICS' LIENS.—After a contractor had given a subcontractor an order on the owner, he abandoned the contract, and the owner completed the building under a clause authorizing him to do so in default of the contractor, and to deduct the cost of completion from any moneys due the contractor. The order had been presented prior to the filing of any liens. And the Supreme Court, 1st Department of New York held that such order was an assignment for so much of the balance due the contractor, after deducting for cost of completion, and was entitled to a preference over liens not filed until after its presentment.
Murry v. Micolino, 31 N. Y. S. Reporter, 1109.



EQUITABLE LIEN FOR BUILDING MATERIALS.—A contract for the purchase of materials to be used in the construction of a house, and notes given for the price, reserving title in the seller until payment, who is thus deprived of a lien under the statute, and also cut off from an action at law until the notes are due, creates an equitable lien on the house and lot which may be enforced in a court of equity.
Rose v. Perry, Supreme Ct. Ala., 16 So. Reporter, 915.

ENFORCEMENT OF MECHANICS' LIEN.—Where the purchaser of land on which there is a mechanics' lien agrees to pay it off and save his grantor harmless as to same, the lien may be enforced against the land in the hands of the purchaser, without first exhausting the lienor's remedy against the grantor.
Cullers v. 1st. Nat. Bank, 6t. Civ. App. Tex. 29 S. W. Rep. 72.

DAMAGES FOR BREACH OF CONTRACT.—Where two parties have made a contract, which one of them has broken, the other must make reasonable exertions to render his injury as light as possible; and he cannot recover from the other damages which might have been avoided, had he performed such duty.
Uhlig v. Barnum, 61 N. W. Reporter, 749.

STATEMENTS IN MECHANIC'S LIENS.—Where a contractor constructs a building as one job, for an entire price, under a special

PRESUMPTION OF NEGLIGENCE IN ERECTING A BUILDING.—Where a person lawfully upon a sidewalk is injured by material falling from a building in the course of erection, and it appears that the sidewalk was not covered or in any way guarded, it is sufficient to raise a presumption that the builder was negligent. This rule is necessary for the protection of those having occasion to use the sidewalks of public streets. The evidence as to how the accident occurred is most usually within the knowledge of the builder and his employes, and the person injured has no means of proving precisely how or why the accident occurred. The first warning of danger that he has is his injury, and then he has no opportunity to investigate the cause.
Dohn v. Dawson, Supreme Court, 1st Dept., 32 N. Y. S. Reporter, 59.

BUSINESS MOSAICS.

Open Doors—"There are no secrets in making the best goods," is the title of the latest advertisement issued by Messrs. N. & G. Taylor Co., Manufacturers of American Tinplate, Philadelphia. This house has long been noted for its novelties in trade literature, but the present circular is something above the ordinary, and is quite original and striking. It conveys at once its meaning.

The reader is confronted with the massive double doors of a factory above which is the inscription "Open Doors", and underneath the words "There are no secrets in making the best goods." These two doors open at the touch, and bring immediately to view the interior of Messrs. N. & G. Taylor Co's. tinning-house. This is a re-produced photograph by the half-tone process, and shows in reality the workmen, the tinning stacks, tin racks, dusting boxes, etc. This Tinning House is the largest in the United States, and as the firm states, "with facilities to produce every grade of bright or roofing tin that is made."

Twenty-two tinning stacks are shown that give an output of over 9000 boxes weekly by day work alone, but the most important thing that strikes the eye, is a large hand printed in bright red, pointing to the tinning stacks at the right foreground of the picture to which is inscribed "The Genuine Taylor 'Old Style' brand is made in the stacks shown on the right; notice there is no shafting or machinery, the work being done entirely by hand, the same as in 1830, and here the "milk in the cocoanut" appears, and the whole import of the advertisement is quickly apparent.

In these days of mysterious manufacturing of Roofing Tin, N. & G. Taylor Co. boldly step forward and frankly invite inspection of their product. "Our doors are open, there are no secrets in making the best goods." Their celebrated brand, the Genuine Taylor "Old Style" brand of Roofing Tin is made in tinning stacks that show no shafting machinery or rolls. The work is done entirely by hand, the same as in 1830. No acid flux is used to injure the black sheets, pure Palm Oil only being employed. These sheets are allowed to soak, and are literally "boiled in oil" before they receive their metal coatings. Made in this way, without any secrets, and with "Open Doors," Messrs. N. & G. Taylor Co. may well advertise the brand which they originated so many years ago, and which they to-day hold as without a peer above their competitors. Jealousy and competition may go far in these days of close rivalry, but their brand, the Genuine Taylor "Old Style" is to well known and established in the hands of honest roofers to need any further encomium to praise its worth and durability.

The MAID—"There were four flies on the cake you sold us yesterday." CONFECTIONER (to clerk)—"Give the lady four raisins."—*Echo.*

San Francisco Gas Light Company. Gas Stove Department. By referring to page ii of this journal it will be seen by their advertisement that no charge is made for placing their stove, while the prices have been so much reduced for the stoves that there remains no excuse for the householder not to add this useful, and economical cooking arrangement to his outfit. We are aware among many who have not given much attention to the subject, that there is a false idea that gas costs too much when used for cooking purposes. If a little care is applied in its use, it will be found not only cheaper than the use of coal, but a great saving of time, with a great increase of comfort to the housekeeper. At 226 Post street, San Francisco, you can see the stoves and find out all about their use.

Whizly—"One swallow does not make a summer." SIZLY—"No, but one grasshopper can make a spring."—*Phidelphia Inquirer.*

If you need water only when the wind blows; if you are satisfied to utilize but a small fraction of the water in your well, if you prefer heavy bills for repairs after each storm in winter, by all means use a windmill; but if you want water at any time, and up to the full capacity of your well, put in the Ajax Coal Oil Gas Engine, the latest thing in mechanics, an engine that uses common coal oil for fuel, and is built by the well known firm of Palmer & Rey, San Francisco, Cal.

"Was he very much cast down after he'd spoken to papa? "Yes. Three flights of stairs."—*Punch.*

P. & B. Paper is the only Building Paper manufactured on the Pacific Coast, and that, moreover, it is manufactured exclusively of materials produced on the Coast. Its quality has been so thoroughly demonstrated that it now almost exclusively used on all first-class buildings that are constructed in San Francisco and elsewhere. In price it is no higher than the ordinary grades of eastern Building Papers. We believe preference should be given to it on all occasions where Building Paper is specified, as every dollar spent for it means just so much more money kept in circulation at home. Their place of business is at 116 Battery street, San Francisco.

Did you make a hit with that red tennis blazer of yours down on the farm?" "Did I? It struck the bull's eye the first time I wore it."—*Indianapolis Journal.*

If you have to be tempted to take a bath, it is only necessary to look at the picture of a porcelain roll rim bath tub as shown on page v to make the temptation impossible to resist. The J. L. Mott Iron Works manufacture these, also every thing else in the way of perfect plumbing materials if you call upon Mr. M. S. James, their Pacific Coast Representative, room 35 Flood building, San Francisco, you can find out all about it.

As it appears to be fashionable to patronize home manufacture you have an opportunity to keep in fashion by ordering your plumbing from the establishment of Joseph Budde, 575 Mission street, San Francisco, if in want of sanitary closets you have your choice. Supreme, Pioneer, Ocean Spray, Cyclone Syphon Jet, Embossed Front Washout Closets with Tank, Seat and Nickel-plate Flushing Pipe. They give the best satisfaction of all Washout Closets, on account of their Superior Tank and Workmanship. They have been adopted by the Palace, Miramar, Sutherland, Occidental and Grand Hotels, Mechanics' Institute, St. Mary's Hospital, and other prominent buildings of San Francisco.

CITY BUILDING NEWS.

Bryant Ave. near 21st. To build; owner, J. J. Noonan; contractor, T. C. Cochrane; signed, May 22; filed, May 25; cost $2525.

Brannan near Fourth. Granite work on church; owner, D. Nugent; architect, J. J. Clark; contractor, Thomas B. Roche; signed, June 3; filed, June 8; cost $3500.

Brannan near 4th. Slating, copper and iron work; owner, D. Nugent; architect, J. J. Clark; contractor, J. D. De Gear; signed, May 16; filed, May 22; cost $3341.

Bush near Baker. To build; owner, J. H. Hunt; architect, J. V. Hull; contractor, A. W. Goss; signed, May 17; filed, May 21; cost $1600.

Bush and Webster. Additions and alterations; owner and builder, Tim Sullivan; architect, A. J. Barnett; days' work; cost $2000.

Bush near Laguna. To build church; owner, Congregation Ohabai Phalome; architect, J. M. Lyons; contractor, Henry Rohling; signed, June 11; filed, June 14; cost $12,950.

Buchanan and Ivy. To build; owner, D. Edwards; contractors, Harrigan & Williams; signed, June 13; filed, June 13; cost $2250.

Buchanan near Hayes. To build; owner, Margaretta Johnson; architect, V. Monet; contractors, Harrigan & Williams; signed, May 8; filed, May 20; cost $3295.

Capp near 17th. To build; owner, Margaret I. McNamara; architect, F. B. Wood; contractor, Neil Molloy; signed, June 6; filed, June 8; cost $3215.

Caroline near Howard. Cottage; owner, George Henston; day's work; cost $1000.

Church near 16th. To build; owner, L. Lane; architect, G. A. Berger; contractor, J. B. Pene; signed, May 16; filed, May 16; cost $2765.

Cherry near Sacramento. To build; owner, Mrs. C. H. Berlin; architect, Frank Mead; contractors, Dahlberg & Lund; signed, May 16; filed, May 17; cost $2485.

Clement near California. To build; owner, C. B. Adams; contractor, A. J. Clout; cost $3500.

Clement near 5th Ave. To build; owner, Geo. M. Coon; architect, A. J. Barnett; contractor, J. J. Manseau; signed, May 21; filed, May 21; cost $1400.

Clay and Locust. To build; owner, E. Dora Cutler; architects, Bugbee & Gash; contractor, D. B. Monroe; signed, May 23; filed, May 23; cost $1750.

Clementina near 4th. To build; owner, Mary Drummond; architect, H. Geilfuss; contractor, L. Cuneo; signed, May 21; filed, May 27; cost $3225.

Cliff House. Electric wiring, etc.; owner, Adolph Sutro; architects, Colley & Lemme; contractor, E. H. Frost; signed, June 1; filed, June 12; cost $1352.

Cliff House. Plumbing, marble floors, etc.; owner, Adolph Sutro; architect, Colley & Lemme; contractor, G. C. Sweeny; signed, June 1; filed, June 12; cost $2995.

Craut and Nye. Cottage; owner, Wm. McCall; architects, Shea & Shea; contractors, B. Duffey & Son; signed, June 7; filed, June 11; cost $1015.

Eddy near Broderick. Alterations add additions; owner, Otto Grundel; architects, Laist & Schwerdt; contractor, H. Behrens; signed, May 16; filed, May 18; cost $1675.

Eddy near Scott. To build; owner, Louis B. Hetty; contractor, J. J. Manseau; signed, June 14; filed, June 15; cost $3750.

Ellis near Franklin. To build; owner, Daniel Neill; architect, B. J. Clinch; contractor, P. J. Brophy, signed June 15; filed, June 15; cost $4760.

Ellis and Mason. Alterations; owner, Harriet McCarthy; architects, Shea & Shea; cost about $2000.

Ellis near Buchanan. To build; owner, Elizabeth Taylor; architect, C. R. Wilson; contractor, J. W. Saunders; signed, April 29, filed, May 15; cost $1465.

Eighteenth near Clover Ave. To build; owner, Johanna Sheehan; contractor, P. F. Lynch; signed, May 20; filed, May 21; cost $2311.

Erie near Howard. To build; owner, Margaret I. McNamara; architect, F. B. Wood; contractor, Neil Molloy; signed, June 6; filed, June 8; cost $2805.

First near Fulton. Additions; owner, H. Hunken; cost $1200.

Filbert near Jones. Alterations and additions; owner, Board of Education, architect, C. I. Havens; contractors, M. C. Brennan & Son; signed, June 6; filed, June 6; cost $15,000.

Filbert and Mason. To build; owner, Catherine Roeder; architects, Mooser & Son; contractor, L. W. Weismann; signed, May 25; filed, May 27; cost $2945.

Fillmore near McAllister; Cottage; owner, Mrs. Laura Albrecht; contractors, Marcuse & Remmel; signed, May 24; filed, June 15; cost $8800.

Fillmore near Grove. To build; owner, C. A. Worth; architects, McDougall & Son; signed, May 25; filed, May 25; cost $2783.

Fillmore near Grove. To build except plumbing; owner, August Jungblut; architects, Martens & Coffey; contractor, F. V. Steinman; signed, May 15; filed, May 21; cost $5200.

Folsom near 24th. Two two-story frames; owner, A. B. Broger; architects, Martens & Coffey; contractors, Williams & Foster; signed, May 23; filed, May 29; cost $7780.

Folsom near 24th. Plumbing; owner, A. B. Broger; architects, Martens & Coffey; contractors, Gulick & Wetherbee; cost $1050.

Folsom near 7th. Additions; owner, Mr. Murray; Carpenter, Mr. Allen; house raiser, A. T. Penebsky; cost $1000.

Folsom near 5th. Alterations and additions; owner, Mrs. Mary A. McHaffie; architect, T. H. Welsh; contractor, J. Hendry; signed, May 21; filed, May 23; cost $1550.

Folsom near 5th. Plumbing; owner, Mrs. Mary A. McHaffie; architect, T. J. Welsh; contractor, J. E. Britt; signed, May 22; filed, May 23; cost $1047.

Fourth near Howard. Excavation and concrete for four-story brick; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Geo. Goodman; signed, May 17; filed, May 20; cost $1864.

Fourty-Eight Ave. near J. street. To build; owner, Wm. Gercke; builder, J. Heyman; cost $2500.

Geary near Octavia. Alterations and additions; owner, Mrs. Clemence Goldsmith; architects, Saltfield & Kohlberg; contractor, J. V. Hull; signed, June 3; filed, June 6; cost $4100.

Grove and Devisadero. To build; owner, Mrs. H. W. Armstrong; contractor, W. Little; signed, May 17; filed, May 21; cost $1195.

Grove near Laguna. Alterations and additions; owner, Mrs. C. W. Hall; architects, Hatherton & Ross; contractor, H. W. Pritchard; cost $1775.

Green near Mason. To build; owner, Herminie Donahue; architects, Shea & Shea; contractors, Magner & Gallagher; signed, May 13; filed, May 17; cost $1130.

Guerrero near Camp. To build; owner, Geo. Kennedy; architect, H. Geilfus contractors, Hood & Watson; signed, May 25; filed, May 27; cost $3335.

Harrison near 10th. To build; owner, J. McDermott; architect, M. J. Welsh; contractor, M. J. Feeley; filed, May 29, filed, May 29; cost $1787.50.

Hampshire and 18th. To build; owners, L. Kundson and Else Nassen; architect, L. Kundson; contractors, Wiegandt & Lassen; signed, May 24; filed, May 29; cost $1330.

Hartford near 19th. To build; owner, Michael Dolan; contractors, Marcuse & Remmel; signed, June 7; filed, June 8; cost $3000.

Haight and Scott. To build except plumbing and painting; owner, Chas. F. Dockring; architect, R. H. White; contractor, H. Behrens; signed, June 4; filed, June 8; cost $12,000.

Haight and Scott. Plumbing, etc., on three-story building; owner, Chas. F. Dockring; architect, R. H. White; contractor, E. J. Lawton; signed, June 4; filed, June 14; cost $1497.

Hoffman Ave. near 22d street. Cottage; owner, S. W. Boyston; builder, Heyman; cost $2500.

Hoffman Ave. near 23d street. Cottage; owner, A. Harge; contractor, J. Heyman; cost $1250.

Howard near 26th. To build; owner, Catherine Daley; contractor, John L. McLaughlin; signed, May 31; filed, May 31; cost $3400.

Howard, Second and Market. Excavating trenches; owner, Mutual Electrical Co.; contractor, A. E. Buckman; cost 24 cts. per lineal foot of trench, $23 each for large man holes, $19 for second size, $17 for third size.

Humboldt near Rhode Island. Cottage; owner, Mr. Hartmann; contractor, J. Bye; cost $600.

Jackson and Pierce. Concrete work, etc.; owner, Abbey M. Scott; architects, Coxhead & Coxhead; contractor, Rhody Ringrose; signed, May 4; filed, May 16; cost $1450.

Jackson and Pierce. To build; owner, Alice Scott; architects, Coxhead & Coxhead; contractor, M. C. Lynch; signed, May 22; filed, May 23; cost $4709.

Jackson near Front. Additions and alterations; owner, Hildebrandt, Posner & Co.; architect, J. J. & T. D. Newsom; contractor, H. T. Brady; signed, May 16; filed, May 16; cost $1773.

Jackson near Mason. To build; owner, Geo. H. Jacot; architect, C. M. Rousseau contractor, R. J. Pavert; signed, May 16; filed, May 17; cost $1415.

Jackson near Franklin. Excavation and concrete; owner, Henry Sahleim architects, Salfield & Kohlberg; contractor, Geo. Goodman; signed, May 16 filed, May 20; cost $1600.

Jackson near Franklin. Carpenter work; owner, Henn Sahleim; architects, Salfield & Kohlberg; contractor, John Furness; signed, May 16; filed, May 23; cost $13,980.

Jackson near Franklin. Plumbing, etc.; owner, Henry Sahleim; architects, Salfield & Kohlberg; contractors, Ickelheimer & Bro.; cost $3845.

Jackson near Franklin. Granite work, etc.; owner, Henry Sahleim; architects, Salfield & Kohlberg; contractor, James Rae; cost $3600.

Jackson near Franklin. Plastering; owner, Henry Sahlein; architects, Salfield & Kohlberg; contractor, C. C. Morehouse; cost 1335.

Jackson near Franklin. Painting; owner, Henry Sahlein; architects, Salfield & Kohlberg; contractors, M. J. & J. J. Donovan; cost $1595.

Jackson and Franklin. Brick work; owner, Henry Sahleim; architects, Salfield & Kohlberg; contractor, J. Wagner; cost $1275.

Jackson near Laurel. Three two-story frames; owner, Chas. Clark; contractor, Casper Zwierlein; signed, June 4; filed, June 7; cost $11,709.

Jessie near 13th. To build; owner and builder, L. B. Schmid; cost $3000.

Julian Ave. near 14th. To build; owner, Mrs. Bridget Costello; contractor, R. Fahy; signed, June 10; filed, June 10; cost $1700.

Lake Merced to the bluff on the Ocean Shore; owner, Spring Valley Water Works; architect, Engineer of S. V. W. W.; contractor, A. E. Buckman; cost $1.45 per Lineal foot about 3,100 ft.

Laguna and Jackson. Heating and ventilating; owner, W. F. Whittier; architect, E. R. Swain; contractor, W. W. Montague; signed, May 10; filed, May 10; cost $2665.

Leavenworth near Glover. To build; owner, Jas. Reilly; architect, T. J. Welsh; contractor, R. Fahy; signed, June 12; filed, June 13; cost $2245.

Market near Fifth. Low pressure steam heating; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, G. H. Tay & Co.; signed, May 29; filed, June 6; cost $10,190.

Market near 5th. Interior fire-proof partitions; owner, Parrott Estate; architect, Pissis & Moore; contractor, A. Wanner; signed, May 25; filed, May 26; cost 12½ cents per sq. foot.

Market near Montgomery. Alterations and additions; owners, Brown Bros. & Co.; architects, Kenitzer & Barth; contractor, I. L. Binet; signed, May 31; filed, June 1; cost $1840.

McAllister and Devisadero. To build; owner, J. J. McCarthy; Sec. Board City Hall Com.; architect, Clinton Day; cost about $75,000.

Mission near West Ave. To build; owner, C. A. Clinton; architects, Havens & Toepke; contractors, Holm & Sheibley; signed, June 11; filed, June 11; cost $2864.

Mission near Main. Carpenter, plumbing, painting, etc.; owners, H. Bird and C. H. Haughy; architects, Martens & Coffey; contractor, A. McElroy; signed, June 15; filed, June 17; cost $3041.50.

Mission near Hermann. Repairs; owner, Board of Education; architect, L. R. Townsend; contractors, Holm & Sheibley; signed, May 13; filed, May 21; cost $1181.

Mission near Hermann. Heating for school buildings; owner, Board of Education; contractor, Geo. H. Tay & Co.; cost $1560.

Mission near Hermann. Painting; owner, Board of Education; contractor, Wm. Linden; signed, May 4; filed, May 21; cost $1400.

Mission near 8th. Carpenter and mill work, etc. for brick building; owner, A Wilson; architect, J. R. Miller; contractor, Woodworth Wetered; signed, May 21; filed, May 22; cost $11,400.

Mississippi street No. 429. Frame building; owner, Ernest and Charlotte Johnsen; architect, P. J. Ellis; contractors, Petterson & Person; signed, May 23; filed, May 24; cost $1363.

Nebraska and Yolo. To build; owner, John J. Hickey; contractor, John D. Coleman; signed, May 29; filed, May 31; cost $3150.

Noe and 14th. To build; owner, John C. Voose; architect, C. Geddes; contractor J. J. Walsh; signed, May 21; filed, May 27; cost $4000.

Nineteenth and Guerrero. Four three-story frames; owner and builder, F. Nelson; cast $16,000.

Pacific Ave. near Webster. To build; owner, Ray Wertheimer; architect, J. E. Kraft; contractors, Gardner & Boyder; signed, May 9; filed, May 15; cost $6838.

Pine near Taylor. Concrete and iron work for retaining wall; owner, E. B. Hindes; architect, S. G. Hindes; contractors, Cushing, Wetmore Co.; signed, May 24; filed, May 29; cost $1485.

Post near Franklin. Alterations and additions; owners, Simon Newman; architect, James E. Wolfe; contractor, John Furness; signed, June 1; filed, June 3; cost $1645.

Polk near Filbert. To build; owner, Luke Burk; contractor, C. C. Blair; cost $4300.

Polk and Vallejo. To build; owner, Martin Hink; architects, Martens & Coffey; contractor, J. Bucher; signed, June 10; filed, June 10; cost $5610.

Sanchez near 17th. To build; owner, Frank P. Currie; contractors, White Bros.; signed, May 17; filed, May 20; cost $1900.

San Jose Road near Brook street. To build; owners, John and Mary Lally; architect, R Rechenbach; contractor, J. Kenealy; signed, June 3; filed, June 3; cost $1530.

Scott near Turk. Alterations and additions; owner, Claus Wreden; architect, W. Winterhalter; contractor, A. B. Schmit; signed, May 16; filed, May 17; cost $2465.

Steiner and O'Farrell. To build except plumbing, owner, D. J. Murphy; architects, Townsend & Wyneken; contractor, W. H. Field; signed, May 18; filed, May 18; cost $10,470.

Steiner and O'Farrell. Plumbing; owner, D. J. Murphy; architects, Townsend & Wyneken; contractor, J. Doherty; signed, May 27; filed, May 29; cost $1525.

Stockton near Lombard. Additions and alterations; owner, Ole Jorgensen; architects, Martens & Coffey; contractor, H. Behrens; signed, May 27; filed, May 31; cost $2200.

Sixteenth near Guerrero. Additions and alterations; owner and builder, L. B. Schmid; cost $2000.

Taylor and Post. To build; owners, Executors Mollenhauer Estate; architect, T. J. Welsh; contractor, A. L. Campbell; signed, May 31; filed, June 3; cost $4700.

Tenth near Howard. To build; owner, Norwegian Danish Methodist Congregation; day's work; cost $4000.

Tenth Ave. near California. To build; owner, Chas. Braun; contractor, J. Heaney; signed, May 21; filed, May 25; cost $1325.

Tennessee street No. 1711. Additions; owner, Mr. Grady; carpenter, C. Holm; house raiser; A. T. Penebsky; cost $3000.

Third Ave. and Clement street. To build; owner, Mattie de Curtoni; architect, Wm. Armitage; contractor, Carls Rossi; signed, May 24; filed, May 29; cost $2800.

Twenty-Third near Douglass. To build; owner, S. W. Royston; architects, Townsend & Wyneken; contractors, Williams & Foster; signed, May 21; filed, May 23; cost $1880.

Twenty-fourth near Alabama. To build; owner, Samuel McKee; architect, Evan Woods; contractors, Westerlund & Holmgren; signed, June 6; filed, June 7; cost $1705.

Twenty-first and Valencia. Additions; owner, J. Lennon; contractor, J. O'Sullivan; cost $2500.

Union near Powell. To build; owner, Jos. Garibaldi; architect, E. Depierre; contractor, D. Ross; signed, May 16; filed, May 18; cost $2877.

Utah near 24th. To build; owner, Martin Johnson; contractor, Thomas F. Michell; signed, June 15; filed, June 17; cost $1175.

Vallejo and Hodges Alley. To build; owners, A. Gotelli and A. Lucci; architect, E. Picasso; contractor, Felice Torigino; signed, May 31; filed, May 31; cost $1600.

Varennes near Union. To build; owner, Davis Garibaldi; contractor, L. Cuneo; signed, June 6; filed, June 6; cost $2350.

Vermont near Humboldt. Cottage; owner, L. Rendler; day's works; cost $1500.

Washington near Walnut. To build; owner, W. S. Gage; architect, H. Burns; contractor, F. A. Williams; signed, May 15; filed, May 16; cost $7253.

Washington near Walnut. Plumbing, etc.; owner, W. T. Gage; architect, H. Burns; contractors, W. S. Snook & Son; signed, May 15; filed, May 16; cost $1730.

Waller street No. 309. Alterations and additions; owner, Mrs. Margaret Hooper; architect, E. C. McManus; contractor, P. J. Brophy; signed, April 4; filed, May 15; cost $1710.

Wisconsin near Napa. Cottage; owner, C. Mackentosh; contractor, J. Young; cost $1200.

York near 21st. To build; owner and builder, Wm. Hebbing; cost $8000.

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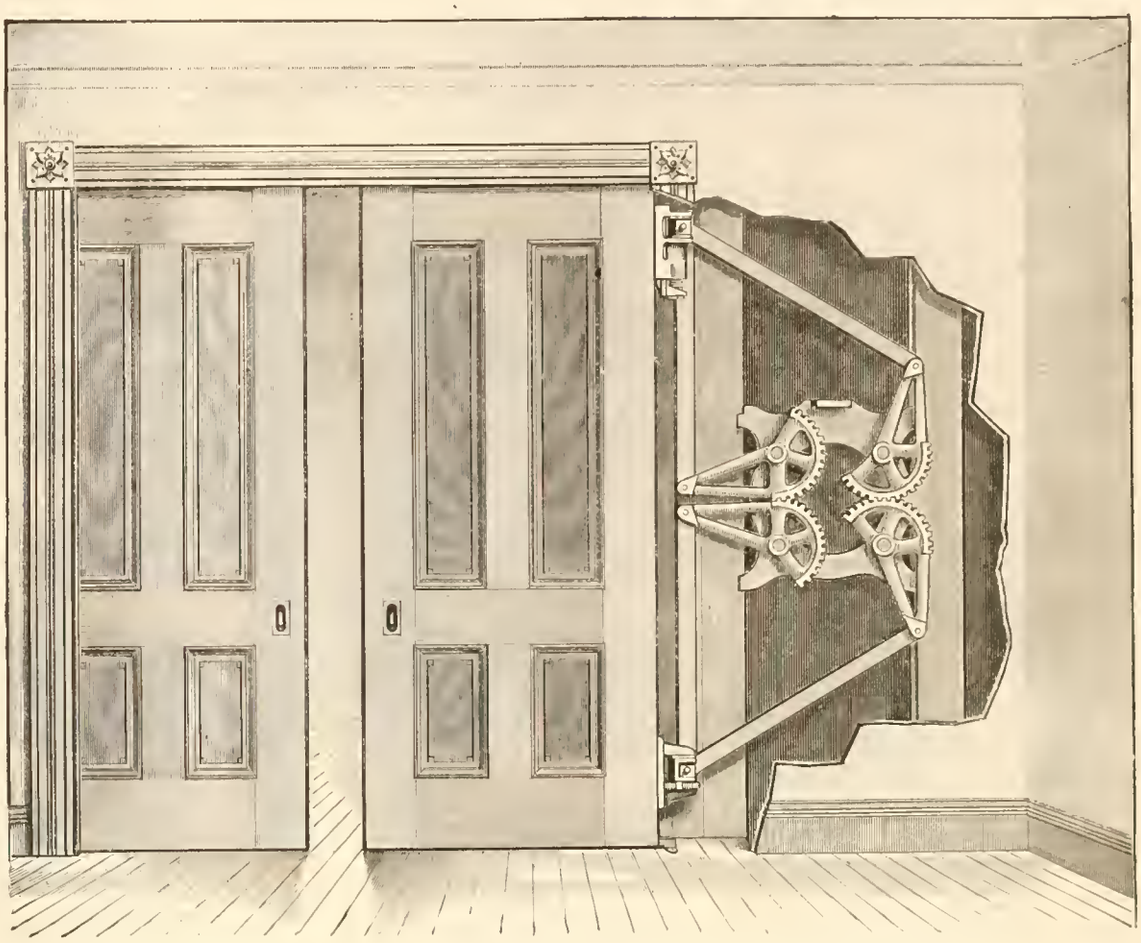

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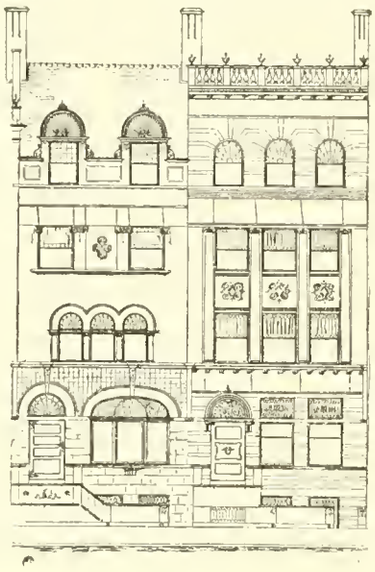

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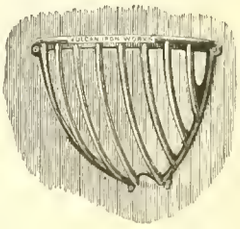

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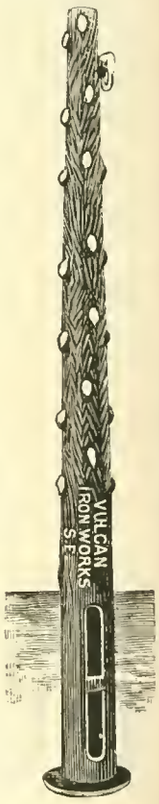

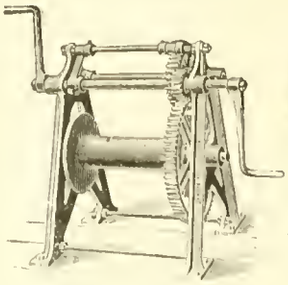

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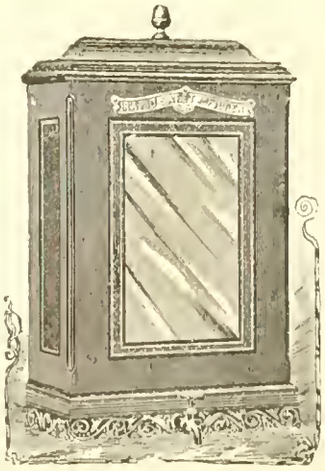

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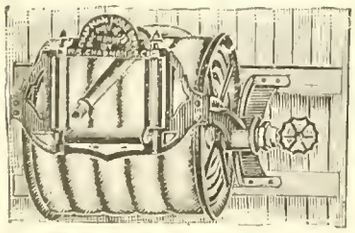

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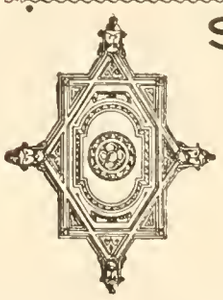

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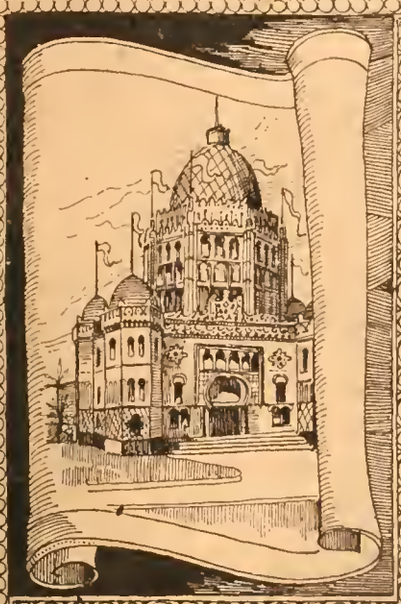

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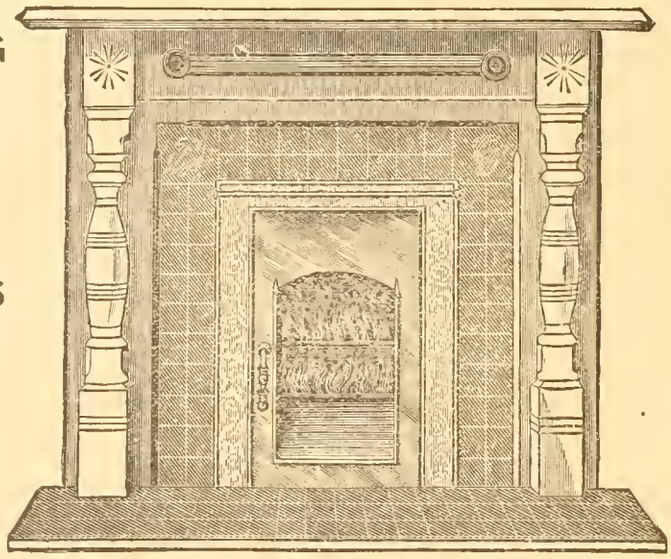

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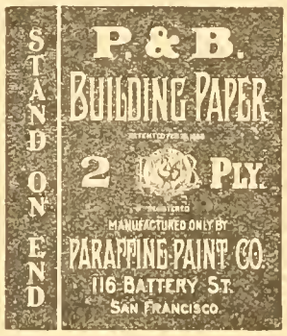

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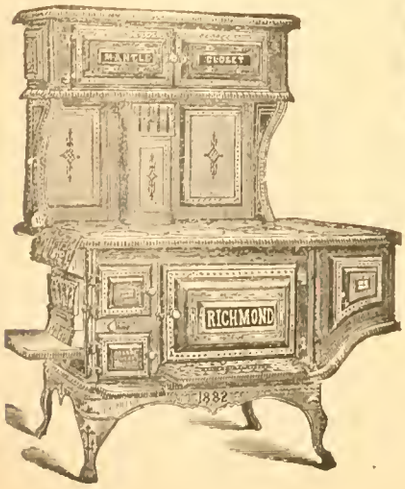

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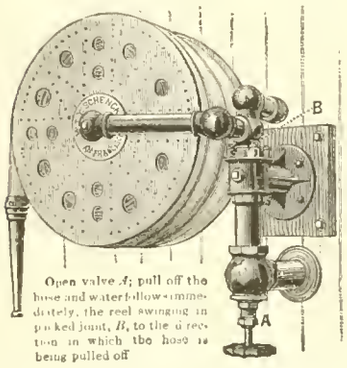

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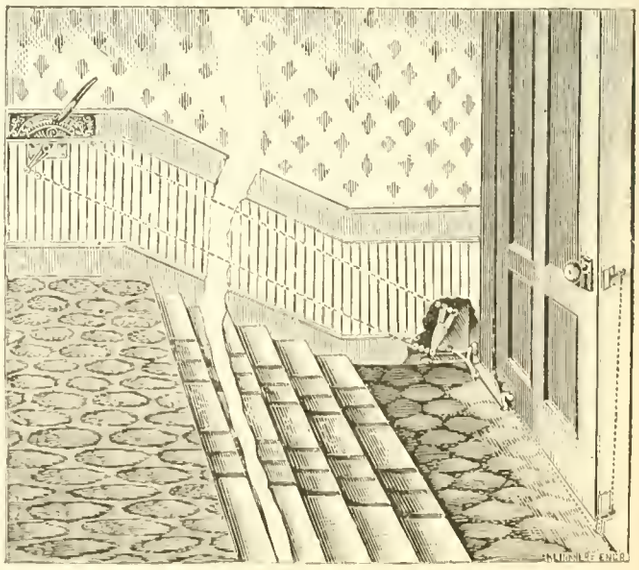

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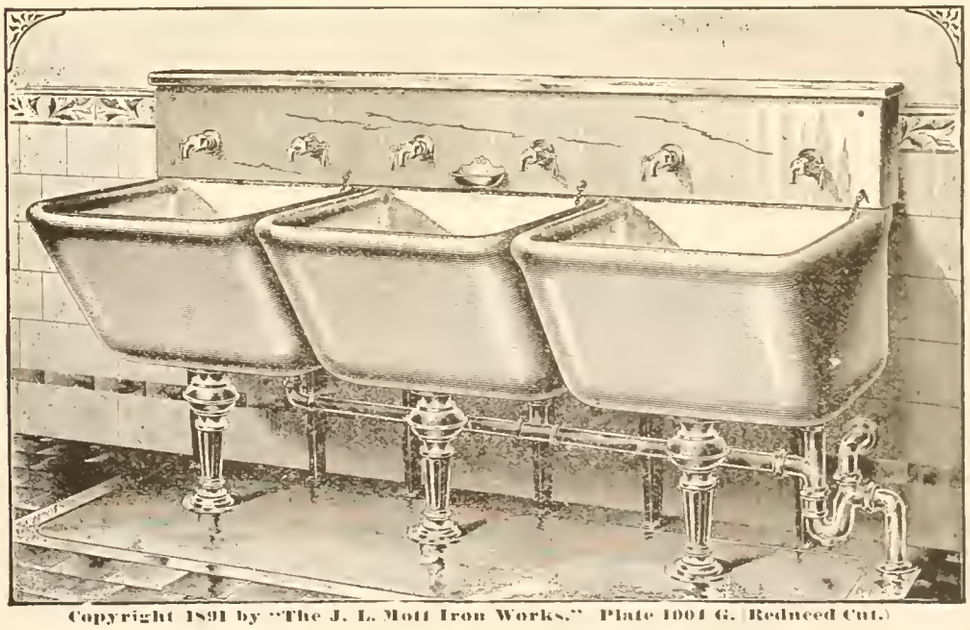

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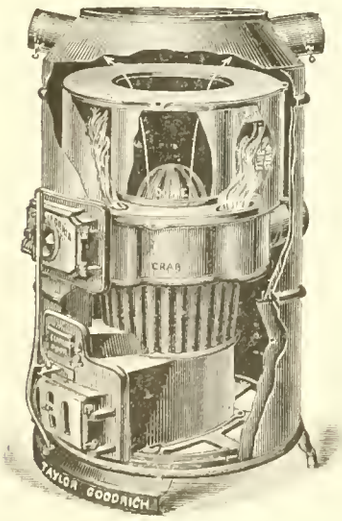

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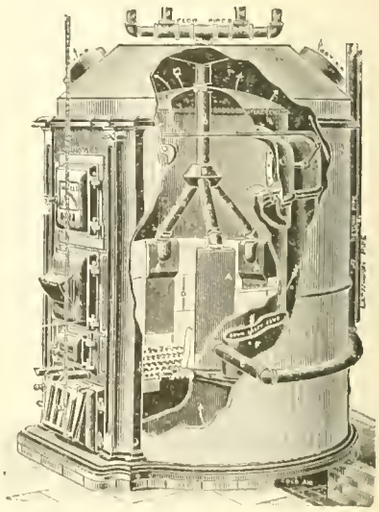

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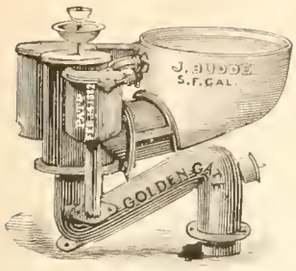

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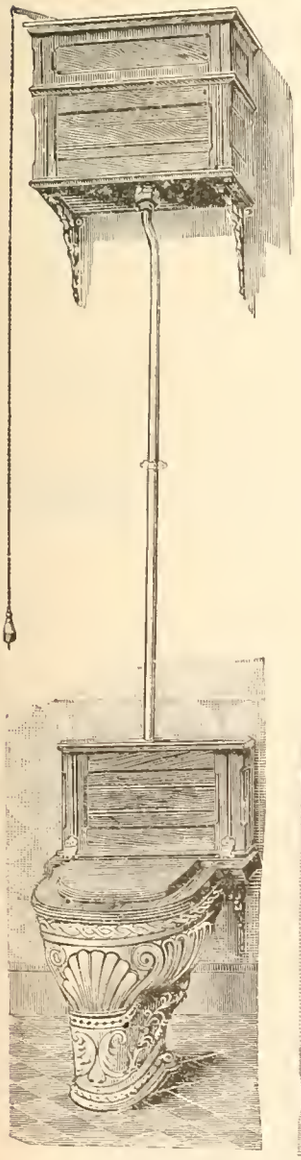

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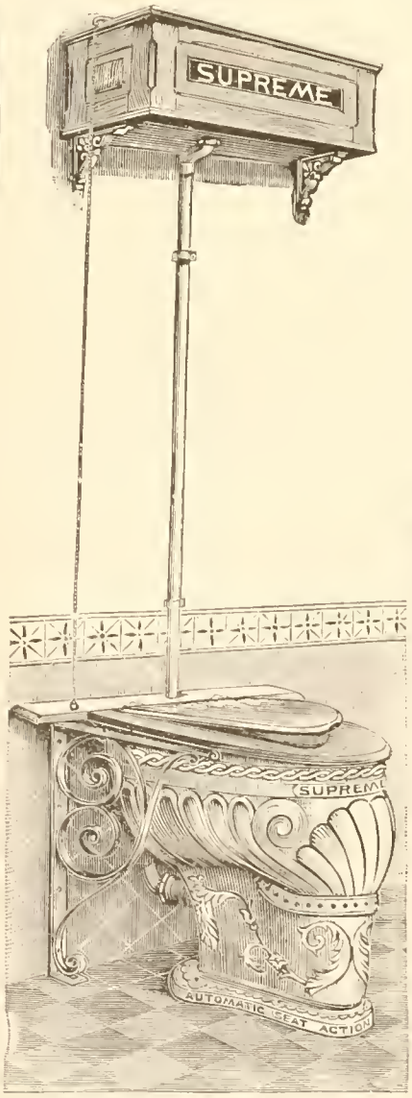

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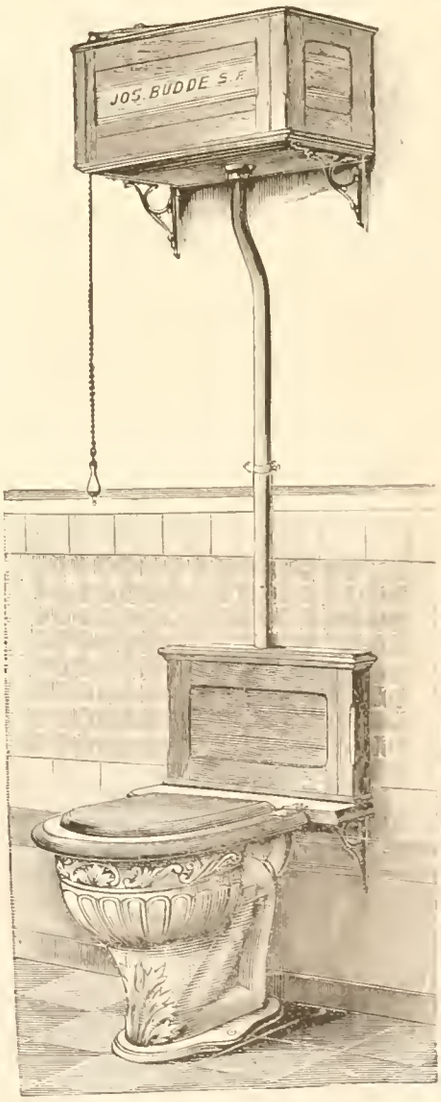

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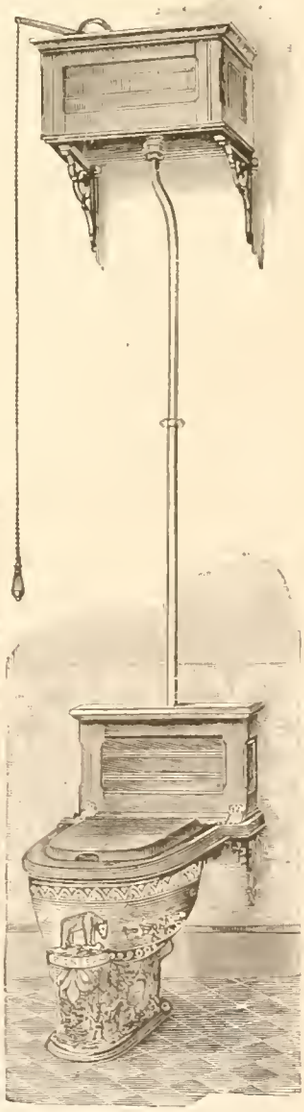

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VOLUME XVI. JULY 20th, 1895. NUMBER 7.

A MONTHLY JOURNAL DEVOTED TO THE ARCHITECTURAL INTERESTS OF THE PACIFIC COAST.

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THE Manufacturers and Producers Association of the Pacific Coast is doing good work in calling attention to the excellence of California manufactures and work and the undesiribility of patronizing goods and work from elsewhere. And in line with the argument let us draw attention to the CALIFORNIA ARCHITECT AND BUILDING NEWS, the representative of Pacific Coast Architects. This should be certainly patronized and helped by the architects, builders and owners of this coast. It now stands on a par with any other publication of its class and price in the world—and in the general return of sense in the matter of trading with our neighbors we believe that the CALIFORNIA ARCHITECT AND BUILDING NEWS will not be forgotten either by California advertisers or by subscribers.

IT goes without saying that the proper bringing up of the rising generation is one of the most important objects before us, and to see that it is properly housed during the time that it is occupied in common education is one of the duties of the commonwealth.

To judge from the Report of the Chairman of the Building Committee of the Board of Education of San Francisco, this city is not quite up to date in this regard. From it we find that taking the school buildings generally they are not in the best condition for a proper æsthetic effect upon the pupils studying therein. Twenty-eight buildings have dirty walls and need whitening or rather tinting, as white walls should not on any consideration be allowed in a school room. Thirty-nine need painting. The playgrounds and yards

are just as necessary to be kept in good order as the buildings themselves. We find, however, that forty-two require their yards bitumenized: planking should no more be used, both on account of decay and for unevenness of surface; not good for running around on.

Proper privacy and clean sanitary appliances in the latrines are other things that tend to rear healthy and modest children—therefore crockery troughs instead of the present thirty-three wooden asphatum lined ones are required and proper partitions, etc. Again, an untidy environment to a school house has its bad effect on the characters of the young ones, therefore nine fences and gates ought to be repaired.

Next, there is no doubt but that over-crowdedness is detrimental to a proper teaching and quite a number of the school buildings are not large enough and require class rooms, principal's rooms, librarys, etc., added thereto.

Twenty-eight buildings require their roofs repaired and nine new floors. In one school the sash and glass are so bad that it is necessary to replace them—the Lincoln School needs repairs, but really a new building should be put up on the site as the present one is dark, gloomy, antiquated and a disgrace to the city. Another building according to the report is in a "dangerous condition and not fit for habitation" and the old Polytechnic School is "in a very bad condition" another is "in a generally dilapidated condition" and so on.

It seems to us good policy to spend money on works which will tend to prevent crime by aiding in rearing better young people, in fact more reasonable than to spend money in finding out, hunting up and punishing crime when it is committed; less police—more proper education.

ROADWAYS AND STREET PAVEMENTS.

OUR people begin to realize the importance of excellent roads and their value to all of our industries. The saving made on the ware and tear of our horses and vehicles, also that made by business men in the difference in time it takes to ride over a good and a poor road, and the pleasure to be derived from riding over a good road, are all points which show the need of having first-class roads.

The increased value of property generally amounts to more than the cost of building a good substantial road, and then, too, they are a standing advertisement for the community in which they are built, making the city or town a desirable one in which to reside, helping thus to increase the population and taxable property. A stranger's impression of a city or town depends largely upon the ease with which he can go from place to place in the transaction of business, or in the pursuit of pleasure. The cost of wagon transportation over the roads of France does not exceed one-third the like expense in America, it being common in rural districts to haul three tons, and in the cities from three to five tons net freight with one horse. These and many more facts the people are weighing, and the more they investigate the better it is for the whole country. This movement has already reached such dimensions that it is being agitated all over the United States, and the people are not going to allow it to stop.

Byrne says countries inhabited by the least civilized people, whose wants are supplied by nature in the immediate vicinity of their dwellings, are almost destitute of roads; hence it has come to be said that roads are the physical symbol by which to measure the progress of any age or people. If the community is stagnant the condition of the roads will indicate the fact; if they have no roads they are savages. There are many methods used in the construction of broken stone roads, and a variety of materials used for street paving, of which I will treat briefly for want of time.

As near as can be ascertained the first broken stone pavements were constructed in France in 1764. In the early part of the present century two systems were introduced into England, the first by Telford and the second by MacAdam. The name of Telford is associated with rough stone foundation. MacAdam disregarded this foundation, contending that the subsoil, however bad, would carry any weight, if made dry by drainage, and kept dry by an impervious covering. The names of both have ever since been associated with the class of roads which each favored, as well as with roads on which all their precepts have been disregarded. MacAdam omitted the foundation of large stones, claiming that it was not only useless but injurious. He was the pioneer of good roads in England, and from his name the word macadamized is derived.

Since the time of Telford and MacAdam the art of road making has been greatly improved by the introduction of rollers and crushing machines. The modern road builder endeavors to adapt himself to circumstances; he must secure a good foundation, either with the natural foundation or with the use of gravel, sand or Telford base, for without this the most expensively-built road will fail. It will not stay in position any more than a building will without a good foundation. Good drainage must be secured, the stone should be properly screened, the largest to pass a two and one-half-inch ring, the second size a one and three-quarter-inch, the third a one and one-quarter-inch, and the fourth a one-half-inch ring. The foundation should be brought to a proper grade and crown, and thoroughly rolled. The depth of stone should be varied according to the foundation and the traffic expected. If a good foundation four inches is enough; if a poor foundation twelve inches might be needed. The crushed stone should be spread in light, uniform layers, well rolled, commencing at the bottom with the largest stone, and using the smallest size for the finish. Nothing but the best quality of stone should be used; for this purpose trap rock is the most desirable, and will wear more uniformly, thus keeping a smoother surface than an inferior stone. We cannot afford to use an inferior quality of stone; it is economy to use the best.

Macadamized streets are the cheapest to build, and give good satisfaction when placed under the right conditions, namely, when the traffic is not two heavy and not confined to a narrow space. For instance, one street is always in good condition, as it has an average traffic which is distributed over the entire surface, while all of the macadamized streets in the business portion of the city, where the traffic is too heavy, are often in bad condition, and should be paved. This class of roads cost from 50 cents to $1 per square yard, varying according to the cost of stone, length of haul, depth of stone and cost of foundation. The cost of maintenance with a moderate traffic, of a thirty-foot roadway, is .013 per square yard. With a heavy traffic, where macadam cannot

be used with economy, it costs from .03 to .25 per square yard. The date of the first introduction of street pavements cannot be determined with certainty. Livy informs us that in the year 584 (about 170 years B. C.) the Censors caused the streets of Rome to be paved from Ox market to the temple of Venus. Streets paved with lava, having deep ruts worn by the chariots and raised banks on each side for foot passengers, are found at Pompeii. The first act for paving and improving the city of London was passed in 1532. Orders were issued by the government for pavements in Paris in the year 1184. In the United States, Boston appears to have been the first city to pave its streets. Drake says the paving of the public streets began very early and was made important about 1700.

STONE PAVEMENTS.

Stone in a variety of forms has been used for paving material for 2,500 years or more. It was used by the Romans in the form of large irregularly-shaped blocks; these blocks being laid on a massive concrete foundation. For solidity and durability this form is unequaled. Boston, Mass., it is recorded, had its streets paved with pebbles as early as 1663, and cobble-stone pavements were introduced into Philadelphia in the year 1718. Cobble stones bedded in sand are very cheap, but their roughness requires a large amount of power and energy to be expended in order to move a load over them; besides they do not make a good pavement, as they are so irregularly shaped that it is almost to hold them in place. They are difficult to keep clean and very unpleasant to ride over. In Brussels this form of pavement was displaced by small cubical blocks of stone, and these were used in Paris and finally came to the United States.

GRANITE BLOCKS.

Granite blocks were of large dimensions. The present granite block is of a narrow, rectangular shape, proportioned and laid on a hydraulic cement base, the joints filled with small gravel stones and paving cement. This method is practically a return to the Roman system, only with blocks of smaller dimensions. Without a doubt this form of pavement is the most durable for roadways which are subjected to a very heavy traffic. If a poor quality of stone is used, for instance those that polish, the surface becomes slippery quickly and is rendered unsafe for travel. In some cities Medina stone is used. It is not so lasting as granite, but is quite durable, less noisy and does not become slippery. Buffalo, N. Y., Cleveland and Columbus, O., afford the best examples of this class of pavement. Limestone block pavements were tried in Kansas City, but in a year or two they wore unevenly and split by the action of frost. Granite block pavements cost from $2.50 on sand foundations, with joints filled with sand, to $4.80 with concrete base and joints filled with paving cement. No satisfactory figures can be obtained for the cost of maintaining granite block pavements in America.

BRICK.

Brick is one of the oldest materials used for paving, having been used upwards of a hundred years in the Netherlands. Pavements laid fifty years ago are still in good condition. There are several brick pavements in the United States, from twelve to twenty-two years old, which are still in good condition. The general experience with this class of pavements is that is furnishes a smooth and durable surface, well adapted to moderate traffic. Many failures have occurred with this class of pavements, owing to poor foundation, defective construction and poor material. Whenever proper materials have been used, good foundation laid, with proper construction, excellent results have been obtained. Amsterdam is paved almost entirely with brick, and it is successfully used in Rotterdam, which is a commercial city. There are many ways of laying a brick pavement. A sand foundation, with joints filled with sand, cost $1.50 per square yard; laid with two courses of brick, one flatwise, with a cushion of sand and a wearing surface set on edge, with joints filled with Portland cement—this costs $2.06 per square yard. If laid on concrete base, with joints filled with paving pitch it costs $2.73 per square yard.

Bricks made from blast furnace slag have been tried, and they have been found to be durable, but soon wear slippery. Ordinary building bricks saturated with gas tar have been experimented with in Nashville, Tenn., but the results were not satisfactory. The advantages of brick pavements are, ease of traction, and good foothold for horses; yield but little dust and mud; are adapted to all grades, and are very easily repaired and kept clean; but slightly absorbent; pleasing to the eye and quickly laid. The principal defects of brick pavements arise from lack of uniformity in the quality of the bricks, and the liability of using bricks too soft which crumble under the action of traffic and frost.

ASPHALT.

In Paris asphalt was first employed for street paving in 1838, though it was not used to any extent until 1854. London introduced it in the year 1869, and it has since then been used extensively throughout Europe and in different sections of this country during the past few years. The difference between the asphalt pavements of Europe and those of America is due to the character of the materials. The former are composed of limestone rock which is naturally impregnated with bitumen, while the latter are composed of an artificial mixture of bitumen, limestone and sand. Many deposits of bituminous rock are to be found in the United States; they have been used to a limited extent. The Island of Trinidad continues to be the source of supply for the United States. The cost of construction varies from $2.50 to $4.50 per square yard. Cost of maintenance in America is placed at an average of 10 cents per square yard per annum; in London for an average of fifteen years at 21 cents per square yard. In Paris it costs about 40 cents per square yard per annum to maintain it, including the charge for renewing one-fifteenth part of the surface every year. In this country the cost of maintaining asphalt pavements is usually included in the original contract for construction for a stated term of years, and after that any repairs that are needed are made by the asphalt companies at the expense of the city, as it calls for expert work and an expensive plant.

The advantages of asphalt pavements are, that they are comparatively noiseless under traffic, are pleasing to the eye and are easily cleaned. The defects of the same pavements are, that they are slippery under certain conditions of the atmosphere, they will not stand constant moisture, and will disintegrate if excessively sprinkled. It is not adapted to grades steeper than 2½ per cent. Colonel Haywood states that in his opinion asphalt will last without

extensive repairs from four to six years, and that in the course of ten years the entire surface will have been renewed.

WOOD.

Wood pavements have been used extensively in Europe and the United States, though with different results in both countries. The experience in this country has been with but few exceptions unsatisfactory, while in Europe, especially in London, wood pavements have been used successfully and are quite popular, due probably to the thorough manner in which they were laid and the careful maintenance. The shoeing of horses and the width of tires has something to do with the wear of pavements no doubt. In some portions of Europe this matter is regulated by law, and should be in the United States. It is claimed that wood pavements absorb the filth of the street, and are very unhealthy.

DISTILLATE PAVEMENTS.

During the years 1886 and 1887 many coal-tar or distillate pavements were laid in Washington, D. C., but many of them proved unreliable. In some towns in England coal-tar macadamized roadways are made. This consists in mixing ordinary coal tar with crushed stone; it should be borne in mind that the stone used must be limestone or some soft stone, otherwise it will not wear down evenly with the tar, thus producing a lumpy surface. Concrete macadam, introduced by Mr. Mitchell, London, Eng., is composed of broken stone, sand and Portland cement, so proportioned that the space, otherwise vacant, is filled with an admixture of Portland cement. Mr. Mitchell states that the first piece of concrete road was laid in Inverness, in the approach to the freight station, in 1870. After the road had been used four and one-half years the wear was hardly perceptible.

GRAVEL ROADS.

We have miles of gravel roads in my city that are very fine in dry weather, but a few minutes rain makes the worst kind of red mud. On residential streets where there is light traffic and sand foundation it makes a fair surface, but on most of the streets where this material is in use, it would be economy to employ some other material. We have often been told of the excellent roads of Europe, which are under the government's control. On these roads a force of skilled men are continually at work making repairs, and any defect, however slight, is immediately repaired. It is not considered that the necessity for continual repairs is an evidence of poor workmanship in the original construction, but rather that an earnest endeavor is being made to keep the roadway in perfect repair. This prompt and constant repairing explains the superior condition of the roadways of Europe.

The men who have these repairs in charge are men skilled in this kind of work, and hold their positions because they are thus qualified. Politics has nothing to do with them as it has in this country. These men are removed for cause only. It takes years to teach men the art of road building and the proper method to be employed in making repairs. Generally in this country cities and towns pay for educating the men in charge of their roads and then politics removes them, but time will make this matter right. It will certainly be made right when people find that it is the only way to have good roads. All of us have much to learn in regard to road building. To a very large extent it is in an experimental stage in this country at the present time, and without doubt millions of dollars will be foolishly expended on worthless pavements. This waste of time and money could be saved to a large extent if every person who has a theory or scheme of his own would consult with men thoroughly informed on the subject.

For instance in this state (Massachusetts) we have a Highway Commission composed of three men appointed by the governor, and who are in touch with the most experienced road builders in the world. Fortunately for our state we have on this commission very bright, intelligent men who have the cause at heart. These men are workers, and are not afraid to go into the field themselves. They are well informed on the construction and maintenance of our roadways, and are in every way qualified to give sound, practical advice, and the officials of our cities and towns could not do better than to avail themselves of their advice and experience. When the people become throughly aroused on this subject they will demand and finally secure the best possible methods of construction and maintenance.

Aside from the facts quoted from well known authors I am indebted for much information to the kindness of many of our citizens who have traveled in this country and in Europe.—*William L. Dickinson in Stone.*

WHAT TO EXHIBIT IN MEXICO.

BY OTTO SCHROEDER.

AFTER fifty years of revolutions and political changes, Mexico is now enjoying peace and prosperity. The administration of General Diaz has incited confidence in Mexico's finances at home and abroad. Industry and Commerce have considerably developed during the last twenty years, export and import have doubled. The value of the exports from Mexico for the financial year 1891 was more than $63,000,000 and of the imports more than $50,000,000. Of the total exports for 1892 the United States received $50,000,000, Great Britain $15,000,000, France $5,000,000, Germany $4,000,000. There are more than 7000 miles of railroad open to traffic. The telegraph lines have a total length of 38,000 miles. The postoffice receipts of the Mexican Government were in 1891–92 $1,142,182. Navigation is practised on lakes and rivers at the coasts and across the Ocean. Mexico possesses a merchant navy of 1268 vessels and there are more than 30 excellent harbors.

Mexico's Trade with the United States increases more rapidly than it does with any other country.

In 1888–1889 Mexico received the following articles of import:

Cotton goods from United States, England, France, Germany	$7,534,089
Comestibles from United States, Spain, Italy	4,893,706
Drugs from United States, France, Germany	1,697,830
Woolen goods, from France, England, United States, Germany	1,613,186
Iron and steel ware from United States, England, Germany, France	1,510,310
Paper from United States, Spain, France, Germany, Italy	1,352,143
Silk goods, pure and mixed, from France	788,581
Linen and hemp goods, from England, France	673,029
Hardware from United States, Germany, France	658,854
Glass and porcelain from United States, France, Germany	607,727
Copper ware from United States, France, Germany	593,167
Machines, from United States	539,582
Furs from United States	414,100
Gold ware, silver ware, platin ware from United States	320,844
Arms and munition from United States	280,453
Carriages from United States	213,796
Stone and earthen ware from United States	81,816
Lead ware, tin ware, zinc ware from United States	75,969

This list shows the American exporters what they may

with profit exhibit at the International Fair, which will be inaugurated at the City of Mexico on the 2d day of April 1896. The American manufacturers must make a display of their electrical and steam machinery, hardware and tools, plated ware and cutlery, agricultural implements, rails and locomotives, well boring apparatus and pumps, pianos, and organs, railroad cars for passengers and freight, mining apparatus, silk and woolen goods, printing presses and type, books and paper, maps and globes, slates and lithographic stones, canned meats and preserves, clocks and watches, quicksilver and petroleum and a hundred other articles which Mexico does not produce herself.

Nobody ought to miss this golden opportunity. Our American Industry cannot afford to stay away from the Mexican Exposition as Spain and France, Germany and Italy are already making strong efforts for a great participation.

"The Federal Government of Mexico has liberally consented to admitting free of duties all materials and machinery to be used in the construction of any buildings on the Exposition grounds, while all goods and articles imported from abroad for the Exposition will be treated by the Mexican Government as imported "in bond" and import duties will have to be paid only in case of sale.

The exhibitors and concessionaires—those who sell foreign articles, or have hotels, restaurants, barrooms, theaters, circuses, and other shows in the foreign section, are to be exempt from all federal taxes.

A Lottery will be conducted in such a way that all prizes are to be bought from exhibitors.

The railway and steamship companies will carry exposition freight for considerably less than the regular tariff.

It is proposed to offer special premiums for the best model houses of different countries, said houses to be entirely constructed of material produced in the country which they represent.

Prizes will also be offered for large hotels which are to be erected on the American and European plans, an inducement which will certainly incite the competition of prominent architects and builders of different countries.

Concessions will be granted by special contract for the sale of souvenirs and novelties of every kind.

So it is of vital interest for the American architects and builders, the cabinet and upholstery branch, the carpet trade, the carriage and harness branch, the clothing and furnishing line, the crockery and glass dealers, the drug and paint manufacturers, the dry goods men, the iron and hardware line, the type foundries, the sewing machine makers, the slate trade, the manufacturers of textile goods, the jewelers, to exhibit at the City of Mexico.

To encourage immigration the Mexican Government has granted free introduction of constructing and repairing materials for tramways for a period of thirty years, it will give concessions for hotels free from taxes for a period of ten years and will allow a free introduction of all furniture, crockery, glassware, etc., to be used in said hotels. It has promised to a Colonization Land Co., which is now being organized at Chicago, the special concessions of free introduction of houses, implements, etc., and the liberation from paying taxes for a period of ten years.

There is no doubt, that Mexico's population will in the near future increase in the most surprising manner, and there will be a vast field for American enterprise and business speculation.

The visitors of the Exposition of 1896 will to a great extent consist of Spanish talking people. Mexico and Costa-Rica, Cuba and Guatemala, Honduras and Porto-Rico, the Argentine Republic and Brazil, Chile and Colombia, Paraguay and Peru, Ecuador and Venezuela will be represented by thousands of people, who will investigate and compare the exhibits of all nations and of all individual firms and who will form their opinions according to their experience. To exhibit in Mexico means to make a display of samples to all Latin-American States. Each American exhibit will be an advertisement for American Industry. No American firm ought to neglect this great opportunity.

SEMI-ANNUAL SUMMARY OF BUILDING OPERATIONS.

It will be seen, that though the number of buildings has slighly reduced, the total amount for the first six months of 1895 show an increase.

FOR FIRST SIX MONTHS.—1895.

1895	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value.	No. of Buildings	No. of Contracts	Alterations & Addit'ns Value.	No. of Buildings	No. of Contracts	Total Value.
Jan'ry	2	3	$ 50,025	31	33	$ 148,880	4	4	$ 20,847	37	40	$ 219,752
Feb'ry	7	9	59,336	38	42	122,880	6	6	12,071	51	57	194,287
March	6	9	170,489	76	81	208,081	8	11	17,418	90	101	395,988
April	7	9	105,333	57	69	274,080	24	24	87,411	88	102	466,824
May	3	7	36,043	85	90	393,037	19	19	33,973	107	116	463,053
June	2	5	74,775	67	85	288,791	11	11	21,612	80	101	385,178
Total	27	42	$ 496,001	354	400	$1,435,749	72	75	$193,332	453	517	$2,125,082

To this amount should be added the further estimated sum of $500,000 where costs have not been given, which would make the total for the first six months, $2,625,082.

FOR FIRST SIX MONTHS. 1894.

1894	No. of Buildings	No. of Contracts	Brick Building Value	No. of Buildings	No. of Contracts	Frame Building Value.	No. of Buildings	No. of Contracts	Alterations & Addit'ns Value.	No. of Buildings	No. of Contracts	Total Value.
Jan'ry	1	5	$ 64,867	27	37	$ 124,620	19	29	$ 46,046	47	71	$ 235,533
Feb'ry	2	6	36,136	22	31	96,975	7	12	17,452	31	49	150,863
March	1	3	11,225	56	60	395,470	14	17	31,591	71	80	441,286
April	7	15	165,437	121	144	289,214	16	21	33,604	144	180	488,255
May	5	12	126,601	35	46	199,653	16	16	50,281	56	74	376,625
June	7	11	74,704	40	46	152,992	13	13	39,166	60	70	266,862
Total	23	52	$ 479,360	301	364	$1,258,924	85	108	$221,140	409	524	$1,959,424

The business of the first six months for several years is shown by the following table.

1885—754	contracts.....value.	$4,267,375
1886—670	" ..... "	2,486,633
1887—516	" ..... "	3,269,914
1888—437	" ..... "	2,719,820
1889—546	" ..... "	3,910,600
1890—556	" ..... "	3,793,858
1891—583	" ..... "	3,916,973
1892—411	" ..... "	2,942,496
1893—475	" ..... "	3,024,498
1894—524	" ..... "	2,456,424
1895—517	" ..... "	2,625,082

AN ALMSHOUSE INSCRIPTION.

In front of some almshouses at Leominster, England, there is the quaint stone figure of a man holding a hatchet in his hand, and underneath there is this inscription:—

He who gives his money before he is dead
May take up a hatchet and cut off his head.

The story current in the neighborhood says that the founder of these almshouses came to want through being involved in building expenses for them, and actually had to seek refuge within their walls as one of the inmates.—*Exchange.*

GAS AND GAS LIGHTING.

SINCE Mr. W. Murdock who lighted his premises in Cornwell with coal gas in 1792, the increased use of this gas has been enormous, as the many millions of tons of coal consumed in its manufacture prove, but even in the early days of its use there were found many old fogies who promised all kind of evil would follow if the use of gas was allowed. More than one hundred years have passed and we find the old fogy still busy at the same old cry of danger in its use to the health of the user; thousands of those at the present time know better by their personal experience and enjoy the luxury of cooking and heating their rooms by its use; the old fogy still lives and croaks however.

THE NEW FRENCH HOSPITAL.

SUNDAY, June 30th, the French Hospital was open to the public for inspection. We think no one of the many thousands that passed through the gates on that day but felt fully rewarded for the trouble of a trip to Richmond. From the reception room through the various wards, into the operating room and last though not least to the famous kitchen with its magnificent range (we say magnificent because it struck us that way upon the first glance), visitors were allowed perfect freedom to inspect and admire the various departments, and many comments were heard upon all sides upon the thoughtful care that must have been displayed by the designers and directors of this most benificial and useful addition to our city, with the thought that generations yet unborn will rise to repeat the praise of the gentlemen who with such untiring perseverance have provided such a blessing to the community.

Each visitor was presented with a beautiful souvenir programme of the New French Hospital containing a history of the French Mutual Benevolent Society, the various illustrations in this souvenir give excellent views of the new buildings as seen from Point Lobos avenue, from 5th avenue as well as interior of main court and various other interior views of the wards and other rooms of interest.

Our space will not permit us to do justice to this subject, but we cannot refrain from giving some general figures to give the reader an idea of the size of this ornamental building erected and dedicated for the welfare of our citizens.

This New French Hospital, occupying a beautiful site 240 by 600 feet on Point Lobos avenue between 5th and 6th avenues and only a few minutes walk from Golden Gate Park is something to be proud of and every one having an interest in the health and welfare of our city will rejoice at the successful completion of such a blessing to humanity.

BOSTON'S PUBLIC LIBRARY.

THE completion of the Boston Public Library, the erection of which has caused a good deal of discussion in architectural journals, though the general opinion appears to be that notwithstanding a Boston architect was not employed as its designer, the building has much to admire.

The American Architect and Building News writing in regard to the cost of the building and expense of running the Library make the startling announcement that it would be cheaper to purchase and give outright the book required, than to lend it from the Library.

It may not be uninteresting to note the commencement of the Boston Public Library as an illustration of what can be accomplished in a community where public interest is once aroused to act for the good of the public.

At the time Mr. Bigelow was Mayor of Boston, Edward Everett, then President of Harvard University, or to write more exactly, University of Cambridge, wrote to Mr. Bigelow, as Mayor of Boston, that if the city would provide a room for the purpose he would donate a thousand volumes as a commencement for a Public Library; at the next meeting of the Aldermen, Mayor Bigelow announced that he would donate a thousand dollars for the commencement of a Public Library. Shortly after this a room was provided in the City Hall and Mr. Everett's books were sent to that place, from that small beginning the present establishment has been founded.

To Mr. George Ticknor of Boston however, perhaps the credit should be given of making the Library a popular institution, Mr. Ticknor's idea was to have a large number of duplicates purchased of any popular work that less delay might be caused in obtaining the book required for the moment.

This plan was adopted with some hesitation on the part of the trustees and from that time the Library became a Boston institution in touch with the public, therefore a success.

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

ROBERT Clark Testimonial Medal Competition, Art Club House, submitted by Renaissance, T. O'Connor, *del & invt.* Elevation and Perspective.

STUDY for Town Hall by D. J. Patterson.

TENDERS TO BE RECEIVED.

Office of the Custodian, U. S. Quarantine Station at Angel Island, San Francisco, California, July 9, 1895. Sealed proposals will be received at this office until 12 o'clock M. on the 31st day of July, 1895, and opened immediately thereafter, for all the labor and materials required for the new bulkhead, etc., at the above named station, in accordance with the drawing and specification, copies of which may be had at this office.

Each bid must be accompanied by a certified check for a sum not less than two per cent of the amount of the proposal. The right is reserved to reject any or all bids, and to waive any defect or informality in any bid if it be deemed in the interest of the Government to do so. Proposals received after the time stated for opening will be returned to the bidders. Proposals must be enclosed in envelopes, sealed and marked, "Proposals for New Bulkhead, etc., at the U. S. Quarantine Station, Angel Island, San Francisco, California," and addressed to

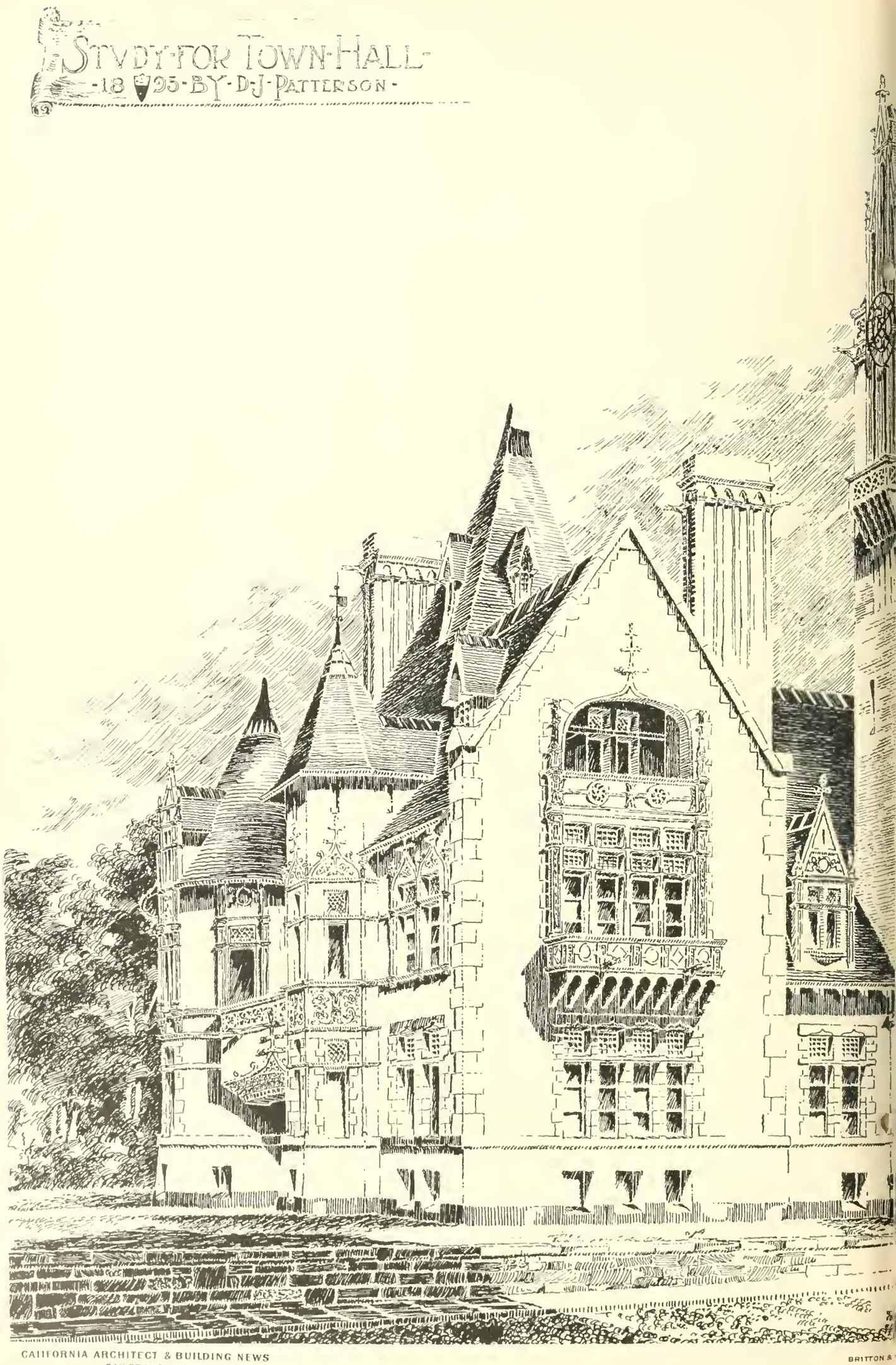
DR. D. A. CARMICHAEL,
Custodian.

ROBERT CLARK TESTIMONIAL MEDAL COMPETITION

T. O. CONNOR - 95

SUBMITTED BY

RENAISSANCE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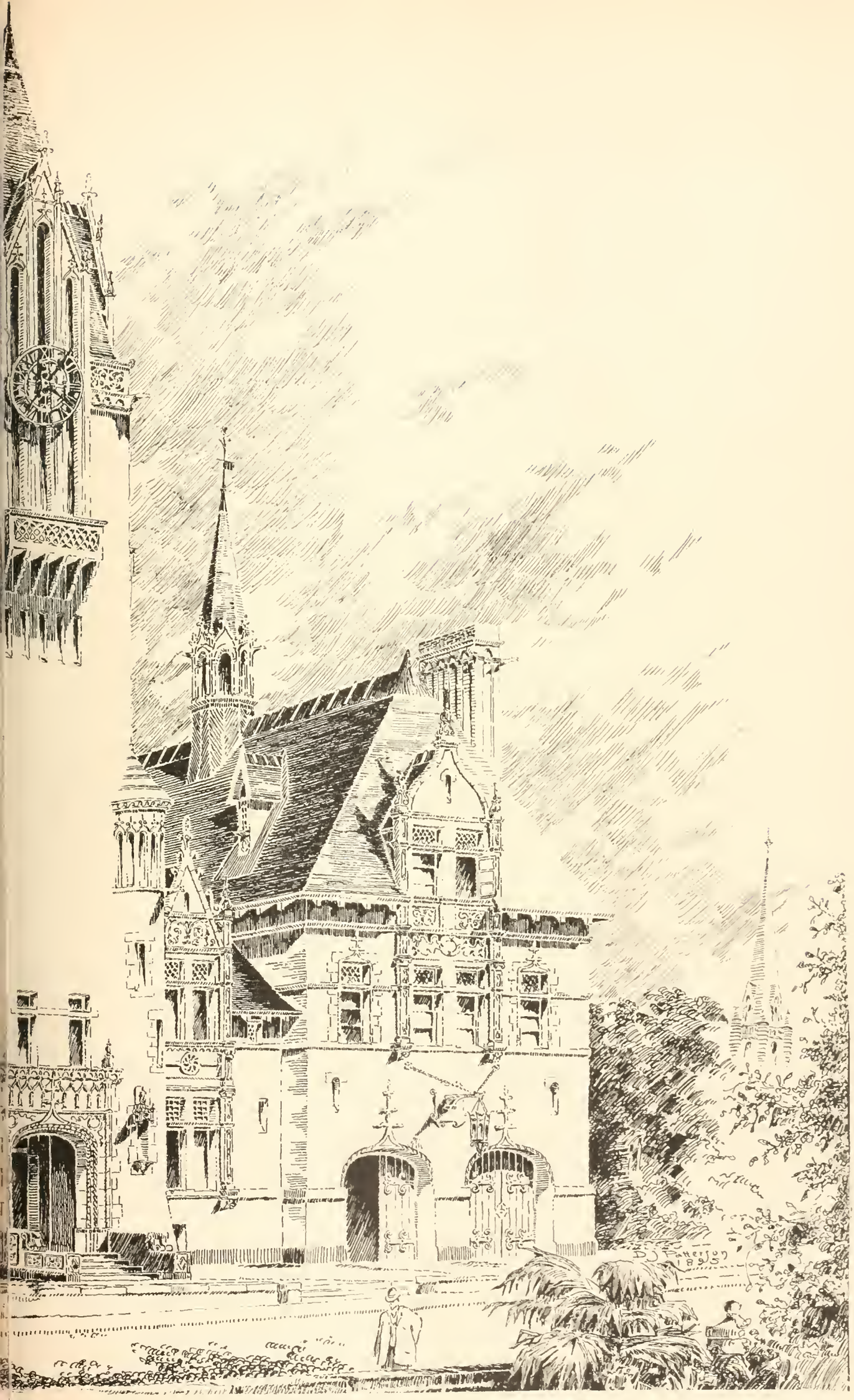
18 95 BY D J PATTERSON

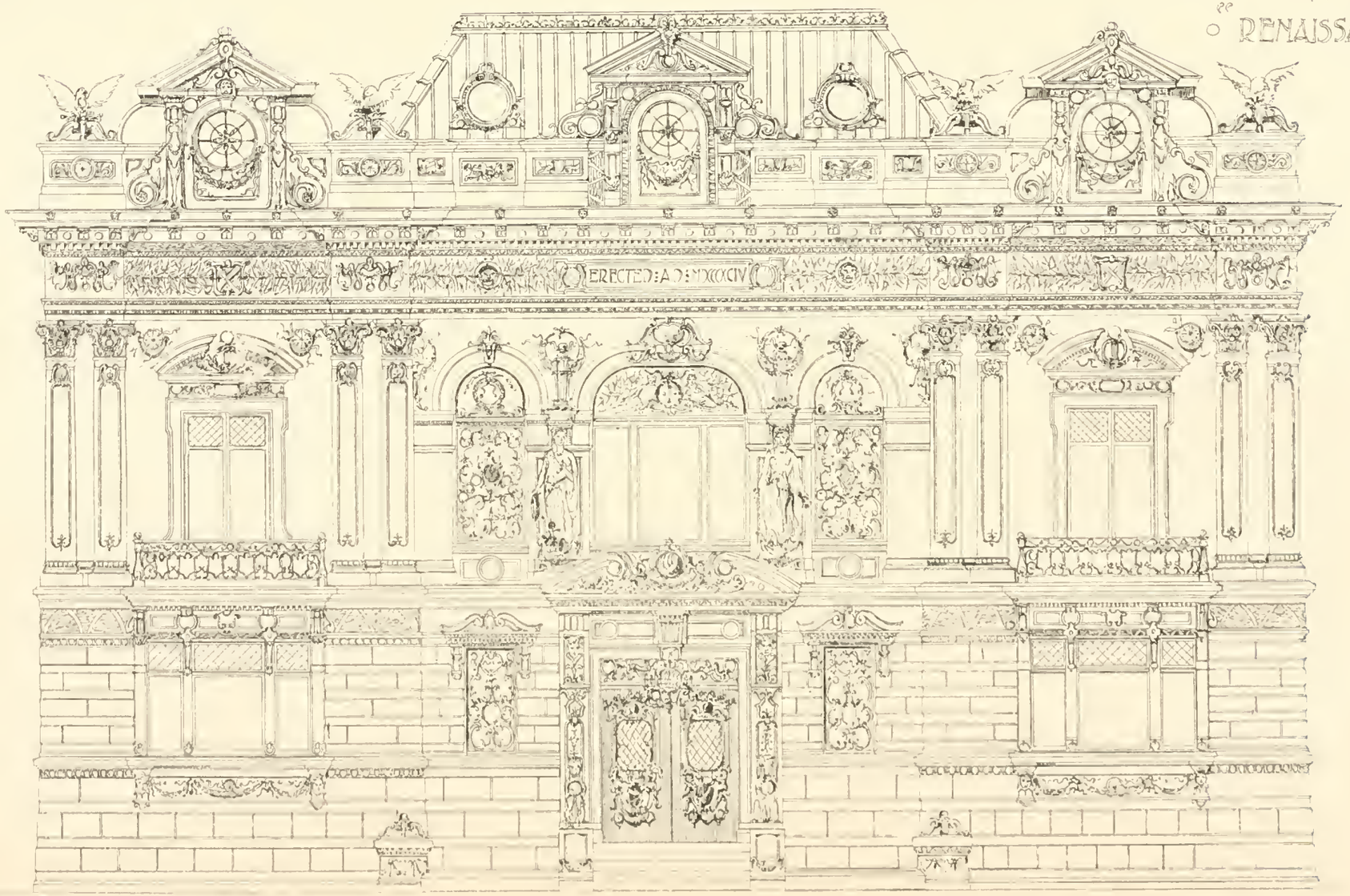

D. Patterson
1895

ROBERT CLARK TESTIMONIAL MEDAL COMPETITION ART CLUB HOUSE

T.O. CONNOR – 95

SUBMITTED BY

"RENAISSANCE"



NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. Geo. W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec'y. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

THE POSTOFFICE SITE.

THE following official report of the United States Government engineers, as to the stability of the site selected for the new Postoffice building in San Francisco, located at the corner of Seventh and Mission streets, seems to set at rest all questions as to the permanency of any building erected on this lot, and removes the last reasonable ground for longer delaying the commencement of work on this long needed and long hoped for building.

San Francisco, Cal., July 8, 1895.

The Honorable Secretary of the Treasury, Washington, D. C.

Sir:—The undersigned, appointed in accordance with the provisions of the act of Congress, approved March 2, 1895, to examine the site for the Postoffice and Courthouse building in San Francisco, have the honor to render the following report:

Under date of April 5, having received notification of appointment to perform the duties assigned to us, we reported to you for instructions to guide us in the proposed examinations. On May 27th instructions were issued from the acting Secretary of the Treasury and received by us on June 4th. In this letter we were requested "to examine the nature of the subsoil and bed of the foundation, and to report to the department whether the character of the same is proper for the contemplated building, and what would be the cost of making the foundation for said building, and whether the construction of said building should be proceeded with on said site." We were further requested to make a recommendation as to the character of the foundation and present an approximate estimate of same.

Immediately after the receipt of the above mentioned letter proposals were invited from S. M. B. Haley, who made the former borings on the site, and the Beal Core Drill Company. One bid was received, that of Haley. Mr. Haley proposed to bore the site to a depth of 30 to 50 feet at the rate of $1.25 per foot; beyond 50 feet he was to receive 50 cents additional for each foot.

Under the former action of the Treasury Department four borings were made at the site. These borings will be designated A, B, C and D. Their locations approximate to the four corners of the building. A was near the southwest corner and was sunk to a depth of 149 feet. B was near the southeast corner, depth 111 feet. C was near the northwest corner, depth 147 feet. D was near the northeast corner, depth 140 feet. In a general way the borings at B, C and D show that to a depth of 38 to 40 feet clean sand of varying colors was found; thence to a depth of 50 feet clay was found and below that sand of different grades and colors. In boring A the indications were not so favorable in the upper strata, as the sand was found mixed with vegetable matter, debris, peaty sand, etc. Our boring indicates like nature of material at same location, extending through only a limited area.

We made eleven additional borings to a depth of 50 feet each. Their location is shown on the foundation plan. They are designated by numbers. Borings 1 to 6 inclusive show that to a depth of about 38 feet clean sand of varying colors was found, as in the previous borings; then a stratum of black peat about 6 inches in thickness; then about a foot of heavy black mud, and below that to 50 feet slate-colored clay. Borings 7, 8, 9 and 10 were made at the southwest corner, as at this location the nature of the sub-soil appears to indicate that some additional precautions should be taken in preparing the foundation, and the accompanying diagram shows the locations of these five borings. No. 7 was in the immediate vicinity of A. Yellow, black and white sand was found to a depth of 24 feet; thence to 40 feet sand, mud, debris, in general rather soft material, and below that to 50 feet sand and clay. No. 8 showed the general characteristics of borings 1 to 6. No. 9 showed common sand to 19 feet; then 1 foot of soft black mud and decayed vegetation; then 1½ feet of black peaty mud and sand, filled with sticks, roots, etc.; then good sand for 18½ feet, with a few grass roots at about 29 feet; at 40 feet 1 foot rotten wood and soft mud; then black clay, hard and sticky, 1 foot thick; then slate-colored and yellow sandy clay to 50.3. Nos. 10 and 11 had the usual characteristics of the first borings; that is, sand to 38 and 40 feet, and clay below to 50 feet. The results of the borings are shown on the tracings inclosed.

Throughout the site the general indications are of hill sand to depth of about 28 feet below the surface of the ground, and below that clay. The Coast Survey chart of 1858 shows that the site was a sand lot covered with brush and small trees. There was no indication of running water on the lot. It is only in the northwest corner for a distance of from 50 to 60 feet along Seventh street and along Mission that the material is of such a nature as to cause extra precautions to be taken with the foundation. Water was found at a depth of 8.8 to 12 feet. The surface of the ground was connected by levels with the beach mark (29.04) and the level of the water standing in each well was determined. This latter level is shown on the plats.

It may be stated that the material as found and brought to the surface may not show its condition in place, as the boring apparatus necessarily broke up the mass, and its mixture with the water in the well caused it to appear soft and yielding. It may be that in its natural condition it may stand the same amount of pressure as in other portions of the site.

To the first inquiry, therefore, whether the character of the subsoil is proper for the contemplated building, we are of the opinion that the building can be safely constructed upon it. As to the inquiry whether the construction of the building should be proceeded with, from an engineering point of view we see no reason to report otherwise.

It remains for us to state in a general way only the character of the foundation and to present an approximate estimate of the same. The foundation should be of concrete. The depth is given at 4½ feet. For the purpose of approximating to the cost we have taken that depth for the main walls and a depth of 3 feet for the columns, making the top of said foundation two feet wider than the base of the wall. For a length of 60 feet on Mission street and on Seventh street, where the soft material is found, the base of the foundation is increased to 25 feet. It is assumed that the ground can be drained into the street sewer for a depth of about nine feet. The water that may be found in the sand to be extracted by pumping will probably depend upon the season in which the excavation may be done. It is hardly capable of estimate, although we insert an item for the work.

The approximate estimate of the cost of the foundation is as follows: Excavation of 9528 cubic yards of material and disposal of same at 50 cents per cubic yard, $4764; 3892 cubic yards of concrete at $7.50, $29,190; pumping, $2,000. Total, $35,944. Contingencies, 10 per cent, $3,595. Total,

$39,549. The concrete proposed consists of the best Portland cement, with twelve cubic feet of selected sand and thirty cubic feet of broken stone to the barrel.

Very respectfully, your obedient servants,

G. W. MENDELL,
Colonel Corps of Engineers.
W. H. H. BENYAURD,
Lieutenant-Colonel Corps of Engineers.

EUROPEAN FORESTRY WORK.

NEARLY all the nations of Europe are engaged at the present time in so controlling the forest supply that every bit of public and private property in trees is placed under restriction against destructive cutting. The forests are all so highly protected, says the *Boston Herald*, and even where no state control exists, the freedom in cutting trees which exists in this country is unknown.

In Germany during the last twenty-five years some 300,000 acres have been reforested, and the government has granted $300,000 in this way to private owners of waste land. In Austria, since 1852, a forest law, which exercises a strict supervision over the forests, both public and private, has been in existence, and no one is allowed to devastate a forest to the detriment of adjoining holders of land, and cleared or cut forest must be replanted within five years.

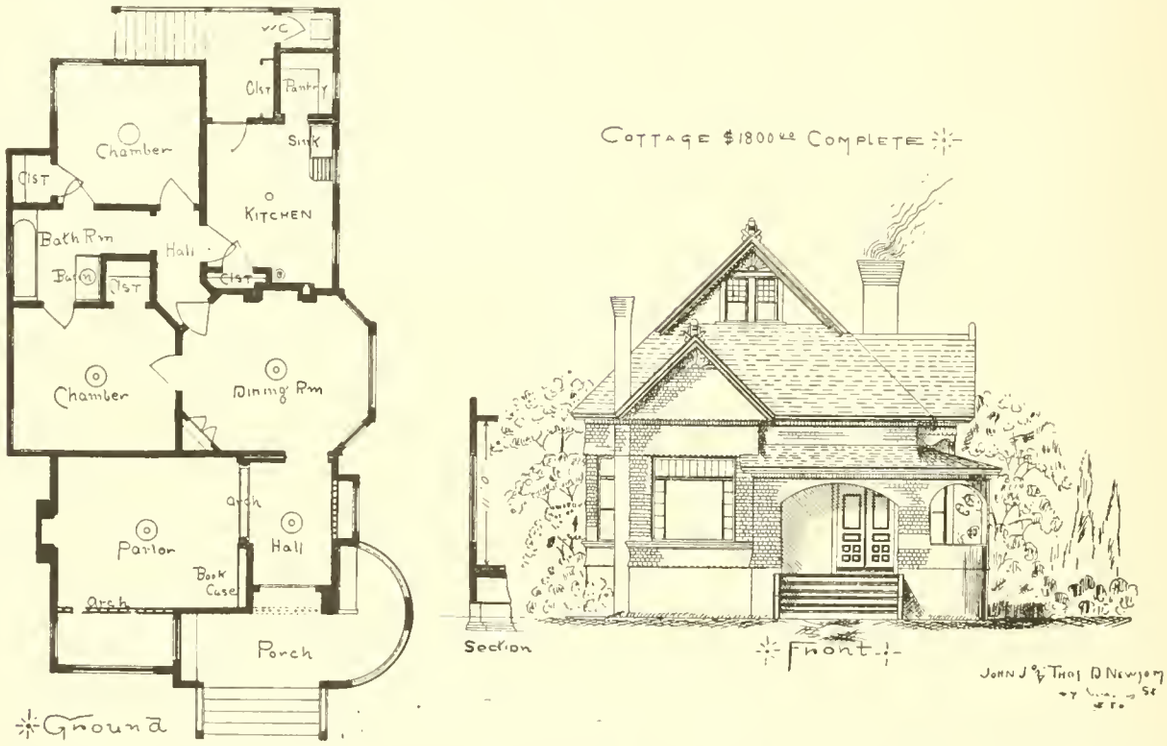
In Italy the effort is constant to increase the amount of wooded lands, and the government contributes three-fifths of the cost of reforestration, upon condition that the work is done according to its plan and instruction. In Switzerland the national government contributes from 30 to 70 per cent of the establishment of new forests, and from 20 to 50 per cent for the planting of protected forests, and the law is very strict in regard to cutting.

France is also deeply interested in public forest property. The forests belong largely to communities and public institutions, as well as to the state, and they are controlled in a manner similar to the regulation of forests in Germany. Here, as well as there, no clearing is allowed except by consent of the forest administration.

In all these countries the strictest attention is paid to the subject of forestry, and schools are everywhere maintained for the purpose of instructing men in this work. Russia has been the only nation where forests have been until lately under no restriction, but since 1888 even this country has had its forest laws, and offers loans on favorable terms for the protection and increase of the forests. Hardly any European nationality is without its state control of the forests or without the training schools in which men are instructed how to take care of them.

They are trying in Europe in every way possible to save the forests, and in the United States efforts are now being made in nearly every commonwealth to regulate and control the wooded lands, but our people are not ready to accept the stringent measures which have been employed as a necessity for preservation.

Mrs. Doolan—"It's too proud yez are t' talk, Norah Foley since yez won th' bicycle in th' tin cint raffle; but if thim ain't yer ould man's pants Oi'm a nagur."—*Leslie's Weekly.*

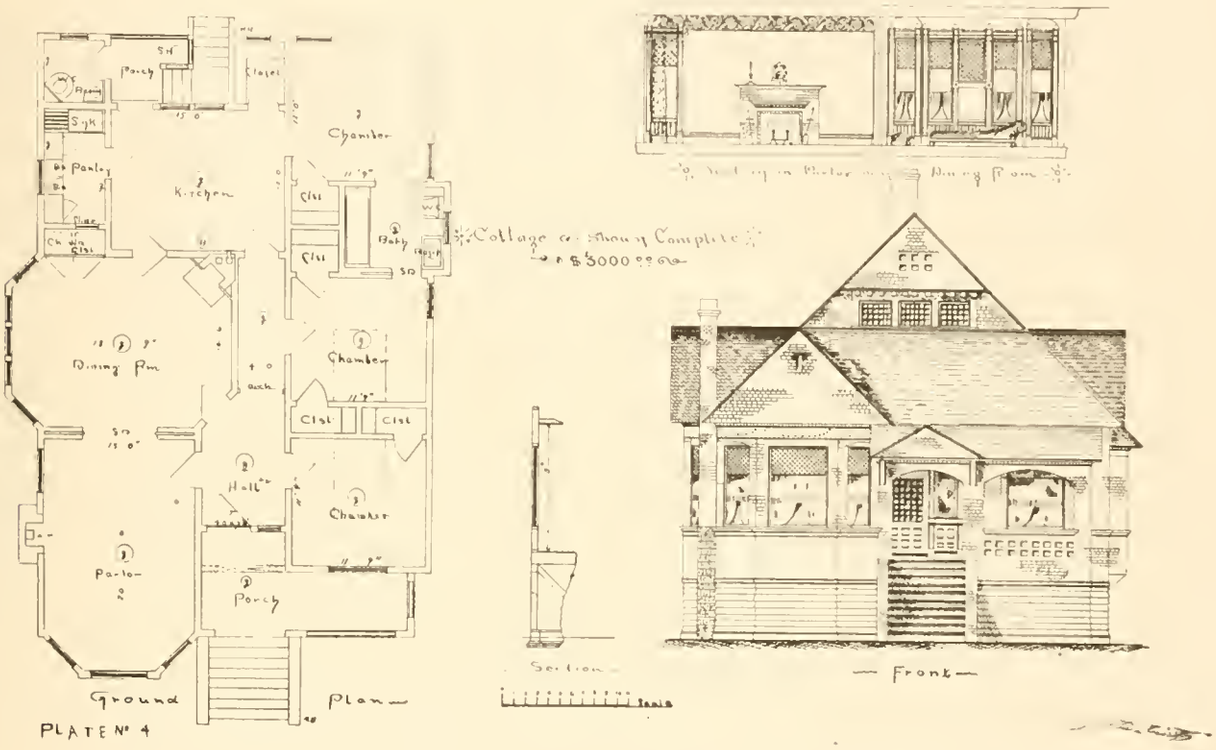


LIPPINCOTT'S Monthly Magazine for July has for the complete novel "A Social Highwayman" by Elizabeth Phipps Train. Among the contents we notice "The Whole Duty of Women" by Emily B. Stone and "The Recall of Flathers" by Charles Dudley Rhodes, U. S. A., is a sketch that will make the readers laugh.

THE ENGINEERING NEWS—We would call the attention of our readers to an able article in this magazine on "Painting Iron Railway Bridges," by Walter G. Berry of New York. In the course of his professional duties Mr. Bery was called upon to prepare a report upon this subject, and certainly he has made a very able one.

THE NEW GALAXY, published by Harry C. Jones, 92-96 Fifth Ave., New York. Subscription price one dollar a year. Volume 1, No. 1 of this magazine for June, 1895, makes a very picturical appearance while its contains much interesting reading, fully illustrated; it appears to be a tender for the *Monthly Illustrator* at $3 a year, which the same publishers announce as the finest magazine published, containing only original matter by the very best writers and the most beautiful pictures.

THE NEW SCIENCE REVIEW for July 1895, published by the Transatlantic Publishing Company, 63 5th Ave., New York, has a table of contents of unusual interest.



The following from an article on "Mental Telegraphy" by Claude Stuart Coles is certainly curious if true:

"Within us is a power, sleeping. Once in a while some sensitive soul has felt it stir, but there was no known law that governed it, no logic with which to convince others of its being; so it was buried deep in the inner consciousness, where hide ideas that dare not seek light, because they are in advance of their age.

"Long ago, at the house of a friend, I saw a photograph of a man's head. As I picked it up there came over me a sense of having known the original; it was the face of a 'friend!' When my hostess entered I asked about the photograph, and she told me who it was. The name meant nothing to me, but the face meant all things that I knew. Several times in the next week I looked at the photograph, always with the same sense of 'having known.' Then eight years elapsed, during which no memory of that face came to me. One day at the theatre, there flashed over me that same curious sense of 'having known.' Instinctively I turned and caught full the glance of the original of the photograph. What he was doing there I have never found out.

"Several miles away from me lived a friend. Days would elapse without our meeting, but if I sat down and wrote her a note she would come, always crossing the note. I became so certain about it after awhile that I would write the note and tear it up. The thought would stir in her the desire to see me. There was no use in mailing it.

"The sight of a certain handwriting would always make my heart sink; it was something that I could not reason myself out of, yet the letters were pleasant and the words fair. One dark day I found out that my instinct was right. I trust it now."

"The trouble with too many women," says the cornfed philosopher, "is that they regard the marriage ceremony mainly as a license to eat onions and wear ill-fitting clothes." —*Journal Indianapolis.*

"Grace before meat," said Noah, as he held the elephan back to make room for the antelope.—*Yale Record.*

CONTRACT *vs.* DAY LABOR.

THE question as to whether day-labor or contract is the more conomical appears to have received a very decided answer in the experiences of the Canadian Federal Government The point is being continually brought up in municipal councils, but in such cases, it is to be feared, the arguments *pro* or *con* are usually propounded by those more or less biased one way or the other, and a clear candid opinion as to the merits or demerits of either system can hardly be expected from city aldermen. The opinion of Parliamentary committees ought to be worth more, at any rate, both systems have been given fair trials in the last few years here, and the results are eminently in favor of contracts. The case of the Lachine bridges, which was re-

counted in the last Canadian letter, proved conclusively how easily the country may be defrauded, and up to almost any amount, by unscrupulous contractors. A legal precedent for the construction of the Lachine bridges was set some years ago by the plan pursued in the case of the Fort Francis locks. This costly and magnificent work was carried out by the Government, under its own inspectors, without contract, and the results were not satisfactory; but it was thought that in a city like Montreal, where labor was plentiful and wages moderate, better results must be obtained. However, as was shown in the former letter, the Government was doomed to bitter disappointment which was only aggravated by the police magistrate, Judge Desnoyers, refusing to commit the contractor for trial, although the evidence seemed clear enough as to the alleged frauds, but not, in his opinion, sufficient to warrant committal. The matter, however, is not at an end yet. Although the Government has failed in the criminal prosecution, a case for the return of overpayments is to be proceeded with The country will hardly care to see more of its great works carried out by day-labor. The experiment of the Toronto Council in having its new municipal buildings finished by day-labor is being watched with interest. This building was begun under contract, but only reached some twenty feet above the ground level, when the contractor was dismissed. Owing to certain difficulties in obtaining satisfactory tenders for the completion of the works, it was decided to proceed with them by day-labor.

Mr. Provand, M. P. for the Blackfriars Division of Glasgow, the managing director of the Chignecto Marine Railway Company, has been in Canada interviewing the Government, and requesting for this Company an extension of time for completion of the works at Chignecto by two years. About three and a half millions have been already expended on the works, and about a million and a half more are required. The amount has been subscribed by shareholders, and it is claimed that the work could be completed in the time asked for. The Canadian Government guaranteed a subsidy of $170,000 a year, for twenty years after the completion of the works, the period of construction being limited in the Charter granted to the Company. Mr. Provand stated that it was through no fault of the Company that the work was not completed within the time specified. It was the fault of the contractor, who was largely interested in contracts in the Argentine Republic at the time of the suspension of Baring Bros., which caused his failure and the stoppage of the works. The engineer of the Company, together with Mr. Provand, visited Canada last year, with the same object in view, and interviewed the premier, the late Sir John Thompson, but, so far as is known, did not obtain any definite promise from him. Whether Mr. Provand has been successful this time or not is still uncertain, but a contention has arisen over the interpretation of the expression "efficient working" of the railway, which occurs in the agreement referring to the granting of the subsidy. The Company interprets the words to mean simply having the railway completed and ready for traffic. The other interpretation is that the road should be actually handling a reasonable amount of traffic, and it is said that if the Company desires the extension of time, it will have to show that it is carrying a minimum amount of traffic, which is put down at a million tons of shipping, annually. Mr. Provand has, in the meantime, gone home, and it is possible some time will elapse before anything is settled.—*The American Architect and Builder.*

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

LIABILITY OF CONTRACTOR'S BOND.—Where a building contractor abandons the work before it is completed, and absconds, the guarantor of his contract, who elects to treat the failure and flight of his principal as settled facts, and to co-operate with the owner in completing the work, becomes liable as surety.

Lender v. Kline, Supreme Court Penna., 31 Atlantic Reporter, 550.

UNGUARDED EXCAVATION IN SIDEWALKS.—The Supreme Court of California holds that a contractor who has completed an excavation in a sidewalk, as required by his contract, is not liable for injuries to persons falling into it, due to the absence of proper guards, if he did not contract to guard the excavation after it was completed.

Cotter v. Lindgren, 39 Pacific Reporter, 950.

RIGHT OF ADJOINING OWNER IN OVERHANGING WALL.—The Supreme Court of New York, 1st Department, holds that where the owner of a lot erects a wall, the foundation of which is wholly on his lot, but a part of which overhangs an adjoining lot, the adjoining owner will not be enjoined from removing so much of the wall as overhangs his property.

Lyle v. Little, 33 N. Y. S. Reporter, 8.

MECHANICS' LIENS.—Where it appeared in an action to foreclose a lien on property owned by husband and wife, that the title was in the name of the husband only, and that knowledge of the fact that he had a wife was not brought home to the lien-holder, it was not error to render judgment for the latter, although the notice omitted the name of the wife.

Wash. Rock-Plaster Co. v. Johnson, Supreme Ct. Wash., 39 Pacific Reporter, 115.

COLLECTION OF NOTES GIVEN FOR BUILDING.—Where notes were given in prepayment for the performance of a building contract, and their sale as negotiable paper was consented to by the makers at the time the contract was entered into, they cannot, in the absence of fraud, raise the issue of no consideration, in an action upon the notes by an indorsee; and they cannot contend that such party is not a bona fide holder.

Churchill v. Bielstein, Ct. Civ. App. Tex. 29 S. W. Reporter 392.

MECHANICS' LIEN—BOND OF OWNER.—A bond given by the owner of buildings upon which a notice of lien for materials and labor has been filed, conditioned for the payment of any judgment that may be rendered against the property, (as provided by the laws of New York, and some other states) takes the place of the property, and discharges and becomes the subject of the lien; and an action is maintainable upon the bond against all parties interested, including the sureties, without first foreclosing the lien upon the property.

Morton v. Tucker, Ct. App. N. Y., 40 N. E. Reporter, 3.

PENALTY OR LIQUIDATED DAMAGES.—A party advertised for bids for a court house, the notice requiring each bid to be accompanied by a check for $500, "as guaranty of good faith that the bidder, in case his bid is accepted, will enter into a contract," etc. One whose bid was accepted failed to enter into a contract within a reasonable time, whereupon the check was appropriated. The Court of Civil Appeals of Texas held that the money deposited was not liquidated damages, but a penalty, and only so much of it could be retained as would cover the actual damage.

Lindsey v. Rockwall County, 30 S. W. Reporter, 380.

LIABILITY OF OWNER FOR DANGEROUS PREMISES.—A party was injured by the falling of a wall of a building. The owner denied negligence, and alleged that the property was in the possession of an insurance company, who were making repairs. The Supreme Court of Louisana held that, there was negligence and that whatever may have been the responsibility of the insurance company during the time that the repairs were being made to a portion of the wall, the owner, aware of the facts as to defective condition, and who takes no part to prevent an accident, is liable for the damage occasioned by the fall.

The safety of walls in a populous city is a public interest, and the interest of one injured is blended with the public right that cannot be subordinated to indefinite agreements between the insurer and insured.

Knoop v. Alter, 17 So. Reporter, 139.

BUSINESS MOSAICS.

Heating and Ventilating—Wright & Olsen at 27 New Montgomery street will furnish estimates for buildings of any size, for heating with either steam, hot water or warm air, also a combination of hot water and warm air.

This concern is agent for the Magee furnaces and ranges as well as Abram Cox Furnace Co., Barbers Ideal Heaters, and Dr. Buckley's water purifier.

Mr. Nincom—"He presented a pistol and declared he'd blow out my brains if I didn't yield." MISS SHAPLEY—"Oh, Mr. Nincom, why didn't you yield?"—*Truth.*

A. Steiger Son's manufacturers of Architectural Terra Cotta, with every thing in their line of business. For further information apply to San Jose, Cal. or San Francisco office Builders' Exchange, 16 Post street.

Pat—"I tell you, Mike, astronomy is a great thing. Why by it you can tell when there will be an eclipse to the very hour and minute." MIKE—"Oh, faith, an' that's nothin', you can look in the almanac an' see that."—*Truth.*

Concrete and Twisted Iron.—The Ransome Patents, now operated by the firm of Keatinge, Leonard & Ransome, rooms 11 and 12 Nucleus building, are showing the advantage of this style of work as is in evidence by the three large tanks for the Portland Water Works, and to come near home an example of their work at Main and Mission streets in this City may be seen, and quite at our own door as it were, the work on the Safe Deposit Building will show the advantage of this style of construction.

Customer—"So you sell these watches at $2.50 each? It must cost that to make them." JEWELER—"It does." CUSTOMER—"Then how do you make any money?" JEWELER—"Repairing them."—*Standard.*

When a man decides upon improving his shop, factory or farm, by the addition of power, he naturally looks for something entirely up to date. He investigates, considers, and finally decides to buy an Ajax Coal Oil Gas Engine as meeting his requirements more fully, and being safer, than any other power obtainable. Palmer & Rey, San Francisco, Cal., the manufacturers of this engine, have earned the gratitute of the public by placing within its reach a reliable, economical power, that defies the restrictions of insurance companies. It is the latest and best.

The J. L. Mott Iron Works, New York, Boston, Chicago and San Francisco, Mr. M. S. James, agent of the well-known firm has removed his office to room 27 Flood Building, third floor.

The new apartments are very favorably situated for the display of goods shortly to arrive from New York when a show room will be opened for the inspection of those interested in their line.

No doubt there are disinterested politicians, my son: but when you find one it will be upon the same day that you discover a shad without bones."—*Boston Transcript.*

The Union Pressed Brick and terra cotta Co., with their works at Vallejo, California, have removed their general office to 310 Pine street, room 15, San Francisco, and are prepared to fill orders in their line for architectural terra cotta, fire proofing, paving tile, etc. A catalogue will be sent on application.

Robinson—"Well, old chap, how did you sleep last night?" SMITH (who had dined out)—"Like a top. As soon as my head touched the pillow, it went round and round!"—*Punch.*

F. H. Rosenbaum & Co. Anything in the way of plate and window glass can be supplied by the above mentioned firm, who are also manufacturers of mirrors, either quicksilver or patent backs. Ornamental cutting and bevelling a speciallty, 567 Market street, San Francisco.

Temperance LECTURER—"Friends, how can we stop the sale of liquor?" INEBRIATE (in the rear of the hall)—"Give it away."—*Ex.*

Plaster of Paris. The Golden Gate Plaster Mills, 125 and 217 Main street, San Francisco. Lucas & Co., manufacturers of Calcined Plaster (Plaster of Paris,) dealers in marble dust, sand plaster and terra alba.

Jones—"Come, go fishing with me old chap." BROWN—"Can't do it: just signed the pledge."—*Judge.*

Sierra Lumber Company, manufacturers and dealers in doors, windows and blinds, also on hand sugar pine, yellow pine, spruce and fir lumber. Yard, corner Fourth and Channel street, San Francisco.

CITY BUILDING NEWS.

Baker near Fell. To build; owner, Premier Cycle Co.; architects, McDougall & Son; contractor, J. M. Weir; signed, June 19; filed, June 19; cost $1791.

Brannan bet. 4th and 5th. Brick warehouse; owner, Ed. Nielsen; mason work by contract; carpenter work by day; cost $5000.

Brannan bet. 4th and 5th. To build; owners, Morgan & Cotter; cost $800.

Brannan bet. 4th and 5th. One-story frame; owner, Father Nugent; contractors, Cameron & McDonald; cost $3000. Only a temporary structure.

Bryant near 22d. To build; owner, C. W. and Anna M. Peck; contractor, Thos. Cochrane; signed, June 24; filed, June 27; cost $2670.

Bryant and Alameda. Alterations and additions owner, Market street railway Co; architect, H. H. Lynch; contractor, J. W. Miller; signed, July 8; filed, July 9; cost $15,930.

Bryant and Alameda. Carpenter work; owner, Market Street Railway Co.; architect, H. H. Lynch; contractor, Frank Schaadt; signed, July 9; filed, July 9; cost $1130.

Bryant near 5th. Concrete foundation; owner, John Horstmann; architect, H. Geifuss; contractors, Gray Bros.; signed, July 9; filed, July 9; cost $2265.

Broadway near Kearny. To build; owners, A. Cereghino and G. Demartini; architects, Wm. Mooser & Son; contractor, H. H. Larsen; signed, July 10; filed, July 11; cost $1160.

Broadway near Kearny. Carpenter work and plumbing; owners, A. Cereghino and G. Demartini; architects, Wm. Mooser & Son; contractors, Ingerson & Gore; signed, July 10; filed, July 11; cost $1360.

Bluxome bet. 4th and 5th. To build; owner, Mr. Smith; contractors, Schutt & Krecker; cost $600.

Bush near Laguna. Sewers, plumbing, etc.; owner, Congregation Ohabai Salome; architect, M. J. Lyon; contractors, Bertram & Son; signed, June 11; filed, July 1; cost $911.

Bush near Laguna. Brick and cement work for foundation; owner, Congregation Ohabai Shalome; architect, M. J. Lyon; contractor, Wm. Stevenson; signed, June 13; filed, June 18; cost $1600.

California near Mason. Excavations, concrete, etc.; owner, Elizabeth J. Fricot; architect, E. Depierre; contractors, Gray Bros.; signed, June 29; filed, July 3; cost $1768.

Castro and 19th. To build; owner, M. Sanders; architect, H. Geilfuss; contractors, Lorenzen & Fevrier; signed, July 3; filed, July 3; cost $1490.

Caselli near Douglass. To build; owner, Mrs. Annie Lacy; architects, Shea & Shea; contractor, Arthur Stevens; signed, July 3; filed, July 10; cost $2695.

Church near 27th. Additional story; owner, John Foge; architects, Havens & Topke; contractor, D. Ross; signed, June 29; filed, July 2; cost $1645.

Cole and Waller. Five two-story frame dwellings; owners and builders; Cranston & Keenan; cost $20,000.

Cole and Waller. To build; owners and builders, Cranston & Keenan; cost $3500.

Clayton near Waller. Three two-story frame dwellings; owner and builder, Wm. Hinkel; cost $12,000.

Clement and 33d Ave. Car house; owner, Sutro Railroad Co.; architect, V. Krolow; contractor, T. McLachlan; signed, June 16; filed, June 27; cost $7270.

Fourth near Howard. Carpenter work for four-story brick; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, J. W. Smith; signed, June 20; filed, July 8; cost $6696.

Fourth near Howard. Plastering; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Martin Garrick; cost $1100.

Fourth near Howard. Brick, granite, etc.; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, P. F. Fitzsimmons; cost $5895.

Fourth near Howard. Plumbing; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Jas. E. Britt; cost $1987.

Fourth near Howard. Iron work; owner, Hugh Dimon; architect, C. J. I. Devlin; contractor, H. Ralston; cost $5600.

Fourth near Brannan. To build barn; owner, Mrs. Zoe J. Venard; architect, C. M. Rousseau; contractor, R. J. Pavert; cost $1240.

Fourth near Howard. Galvanized iron work for four-story brick; owner, Hugh Dimond; architect, C. J. I. Devlin; contractor, Jas. Guilloy; cost $1000.

Fourth near Brannan. To build; owners, Krug & Yung; architect, F. Mead; contractor, W. H. Mead; cost $1000.

Fourth and Brannan. To build barn and stable; owner, H. B. Goeckens; days' work; cost $1000.

Filbert near Mason. To build; owner, Mrs. Mary Bogan; architect, C. M. Rousseau; contractor, C. Knuttle; signed, July 10; filed, July 11, cost $1200.

Filbert and Jasper. To build and alterations; owner, Trinidad Boylin; architect, P. Boulin; contractor, L. M. Weismann; signed, June 25; filed, June 27; cost $2129.

Fillmore near Waller. Alterations and additions; owner, Geo. Scott; architect, A. J. Barnett; contractor, M. Hartnell; signed, June 22; filed, July 2; cost $1725.

Fifth near Bryant. To build; owner, C. Reichling; days' work; cost about $2000.

Francis near Mission. Cottage; owner, J. B. Mathews; contractor, W. W. Rednall; signed, July 9; filed, July 9; cost $695.

Fulton near Broderick. To build; owner, Patrick Lally; architect, H. Geilfuss; contractor, W. A. Muller; signed, June 17; filed, June 17; cost $3035.

Gough near Vallejo. To build; owner, Edward B. Rambo; contractor, W. H. Wharff; signed, June 20; filed, June 21; cost $5570.

Green near Scott. To build; owner, Robert K. Palach; architect, Edgar A. Mathews; contractor, Andrew T. Ruch; signed, June 6; filed, July 2, cost $4723.

Greenwich near Jones. Two three-story buildings; owner, C. Bill and J. Ohlemutz; architect, Emil John; contractor, J. McLean; signed, Jun filed, June 25; cost $7725.

Guerrero near 15th. Two two-story frames; owner, W. J. B. Henriville; architect, T. Godart; contractor, J. A. Arnott; signed, June 20; filed, June 22; cost $6985.

Harrison near 25th. Alterations and additions; owner, Mrs. Margaret Godial; contractors, Westerlund & Holmgren; signed, May 18; filed, June 24; cost $1400.

Hayes near Webster. To build; owner, Mrs. Mary Marsily; architect, C. M. Rousseau; contractor, R. J. Pavert; signed, June 22; filed, June 25; cost $8875.

Haight near Scott. To build; owner, Mrs. F. Cahill; architects, Mahoney & Ryland; contractors, Ackerson & Paterson; signed, June 25; filed, June 29; cost $4943.

Haight and Fillmore. Alterations and additions; owner, Chas. Haigmaier; contractor, G. G. Gillespie; signed, June 6; filed, June 18; cost $4500.

Helen near California. Alterations and additions; owner, John J. Mundwyler; contractor, H. R. Schmuckert; signed, June 27; filed, June 27; cost $2645.

Holy Cross Catholic Cemetery. Vault lined with marble; owners, Executors Estate of J. Ivancovich; architect, B. J. Clinch; contractor, A. Paltenghi; signed, June 21; filed, June 24; cost $9425.

Jackson near Steiner. To build; owner, Austin C. Tubbs; architects, Mathesen & Howard; signed, June 12; filed, June 21; cost $3340.

Jessie near 14th. To build; owner, Mrs. C. L. Straven; contractor, A. Petry; signed, July 8; filed, July 8; cost $1690.

Laurel Hill Cemetery. Granite coping and concrete foundation; owner, Sharon Estate Co.; architect, A. Page Brown; contractor, P. Deegan; signed, June 28; filed, July 1; cost $1498.

Lombard near Fillmore. Three two-story buildings; owner, Michael Hogan; contractor, C. Andresen; signed, June 4; filed, June 19; cost $6250.

Market near 5th. Sewers, plumbing, etc.; owner, Mrs. Abbey M. Parrott; architects, Pissis & Moore; contractor, R. A. Vance; signed, June 19; filed, June 24; cost $38,775.

Market bet. 5th and 6th. Mosaic floor, etc.; owner, Miss Emma Spreckles architects, Reid Bros.; contractors, W. W. Montague & Co.; signed, May 28; filed, July 2; cost $8000.

Market bet. 5th and 6th. Marble work; owner, Miss Emma Spreckles; architect, Reid Bros.; contractor, W. S. Brown & Co.; signed, June 14; filed, July 2; cost $2116.

Market and Sanchez. To build; owner, Mrs. E. L. O'Neil; architects, Salsburn & Embury; contractors, West & Fenn; signed, July 6; filed, July 6; cost $4350.

McAllister and Fillmore. To build; owner, Caroline B. Watson; architects, Percy & Hamilton; contractor, Winslow Hall; signed, June 26; filed, June 26; cost $10,943.

McAllister and Fillmore. Plumbing; owner, Caroline B. Watson; architects, Percy & Hamilton; contractor, R. Rice; signed, June 26; filed, June 26; cost $1500.

McAllister and Pierce. To build; owner, Mrs. B. Morris; architect, J. E. Krafft; contractors, Ackerson & Paterson; signed, June 19; filed, July 8; cost $6170.

Mission and New Montgomery. Carpenter work on two-story brick; owner, Builders' Exchange; architect, A. Page Brown; contractor, D. Powers; signed, July 8; filed, July 11; cost $2070.

Mission and New Montgomery. Mason work, Spanish tiles, etc.; owner, Builders' Exchange; architect, A. Page Brown; contractors, Riley & Loane; signed, July 8; filed, July 11; cost $2397.

Mississippi near 18th. To build; owner, J. Greig; contractors, Westerland & Holmgren; signed, July 3; filed, July 3; cost $2464.

Oak and Clayton. To build; owner, Ellen B. Franzell; architects, Coxhead & Coxhead; contractor, Wm. Knowles; signed, July 12; filed, July 12; cost $7261.

O'Farrell near Powell. Additions and alterations; owner, Mrs. S. O. Alexander; architects, Salfield & Kohlberg; contractor, H. Rohling; signed, May 24; filed, June 25; cost $3025.

Pacific near Leavenworth. Alterations and additions; owner, Margaret Wolfartin; contractor, H. R. Schmuckert; signed, June 18; filed, July 9; cost $1845.

Pacific near Leavenworth. To build; owner, B. Frank; architect, H. Geilfuss; contractor, John H. Munster; signed, June 18; filed, June 20; cost $3124.

Pennsylvania Ave. and Butte. Alterations and additions; owner, James Eva; architect, R. H. White; contractor, W. Chatham; signed, June 19; filed, June 19; cost $1993.

Pierce and Fulton. To build; owner, Wm. McCormick; architect, A. J. Barnett; contractors, Ogle & Smith; signed, June 28; filed, July 1; cost $9700.

Pine near Buchanan. To build, owner, J. A. Ulrich; architect, E. J. Vogel; contractor, M. J. Savage; signed, June 20; filed, June 24; cost $4030.

Pine near Taylor. Carpenter work; owner, Edward B. Hinds; contractor, M. J. Savage; signed, June 17; filed, June 20; cost $6700.

Pine near Taylor. Plumbing, etc.; owner, Edward B. Hindes; contractor, Philip Haub; signed, June 17; filed, June 20; cost $1195.

Pt. Lobos Ave. near 33d. Cottage and stable; owner, Eliza Potter; contractor, W. W. Rednall; signed, June 18; filed, June 20; cost $2000.

Richland Ave. near Anderson Ave. To build; owners, E. F. and Nellie Sautter; architect, J. V. Embury; contractors, Salsbury & Embury; signed, June 12; filed, June 20; cost $1700.

Sacramento near Baker. To build; owner, J. H. Loeber; architects, Townsend & Wyneken; contractor, D. Currie; signed, June 25; filed, June 27; cost $2359.

Sacramento near Devisadero. To build; owner, Esther M. Wilson; architect, W. H. Lillie; ontractor, W. J. Field; signed, June 27; filed, June 28; cost $4825.

Sacramento near Laguna. To build; owner, Richard E. Queen; architect, A. Page Brown; contractors, Mahoney Bros.; signed, June 18; filed, June 18; cost $27,095.

Sagamore near Capital. Two Cottages; owner, William Forbes; contractor, John Flaherty; signed, June 21; filed, June 22; cost $1250.

Sixth Ave. near Clement. To build; owner, John Higgins; contractor, M. J. Scott; signed, July 3; filed, July 3; cost $1100.

Sixth and Stevenson. Steam heating in four-story brick; owner, Margarethe Schwerdt; architects, Laist & Schwardt; contractors, J. G. Grannis & Co.; signed, July 1; filed, July 11; cost $1246.

Stockton and California. Additions and alterations; owner, Alfred E. Davis; superintendent, J. W. Duncan; carpenters, Cannon & Mooney; cost $10,000.

Second Ave. near California. To build; owner and builder, Mr. Haskell; cost $2000.

Second Ave. near California. Cottage; owner, G. H. Earle; architect, J. C. Felton, Jr.; contractor, Jas. McConahey, signed, June 20; filed, June 29; cost $1700.

Second Ave. near Clement. Cottage; owner, Isador I. Green; contractor, W. W. Rednall; signed, June 18; filed, June 18; cost $2000.

Scott near Fulton. To build; owner, Mrs. Eliza Baum; architects, Kenitzer & Barth; contractors, Schuff & Krecker; signed, June 25; filed, June 26; cost $6414.

Tennessee near 19th. To build; owner, Rev. P. O'Connell; architects, Mahoney & Ryland; contractors, R. Doyle & Son; signed, June 16; filed, July 1; cost $9089.

Third Ave. near Clement. To build; owner, R. I. Whelan; contractor, H. Rowe; cost $2100.

Twelfth Ave. near California. To build; owners, Jules J. Bailly and wife; contractor, Wm. R. Kenny; signed, June 28; filed, June 29; cost $1225.

Twenty-second and Guerrero. To build; owner, A. Matcacci; architect, E. J. Vogel; contractors, Patterson & Person; signed, June 29; filed, July 2; cost $8872.

Van Ness Ave. and Clay. Steel work; owner, Claus Spreckles; architects, Reid Bros.; contractors, Western Iron Works; signed, June 12; filed, July 2; cost about $8000.

Washington near Mason. Alterations and additions; owner, J. Mueller; architects, Mooser & Son; contractors, Patterson & Person; signed, June 28; filed, June 29; cost $2800.

Washington near Central Ave. To build; owner, Constant Richert; architect, E. Depierre; contractor, Davie Ross; signed, June 21; filed, June 26; cost $3420.

Washington near Fillmore. To build; owner, Emma Joseph; architect, W. H. Lillie; contractors, Moore & Cameron; signed, June 26; filed, June 26; cost $2547.

Waller near Masonic Ave. Four two-story frames; owner and builder, J. Stierlein; cost $16,000.

Waller near Masonic Ave. To build; owner, Mrs. Martin; builder, J. Stierlein; cost $4000.

York near 22d. Cottage; owners, Ella and Peter Kammerow; contractors, Ogle & Smith; signed, July 6; filed, July 6; cost $1700.

York near 22d. Cottage; owner, Robert Goetze; architect, Emil John; contractor, F. A. Hellmuth; signed, July 10; filed, July 12; cost $1625.

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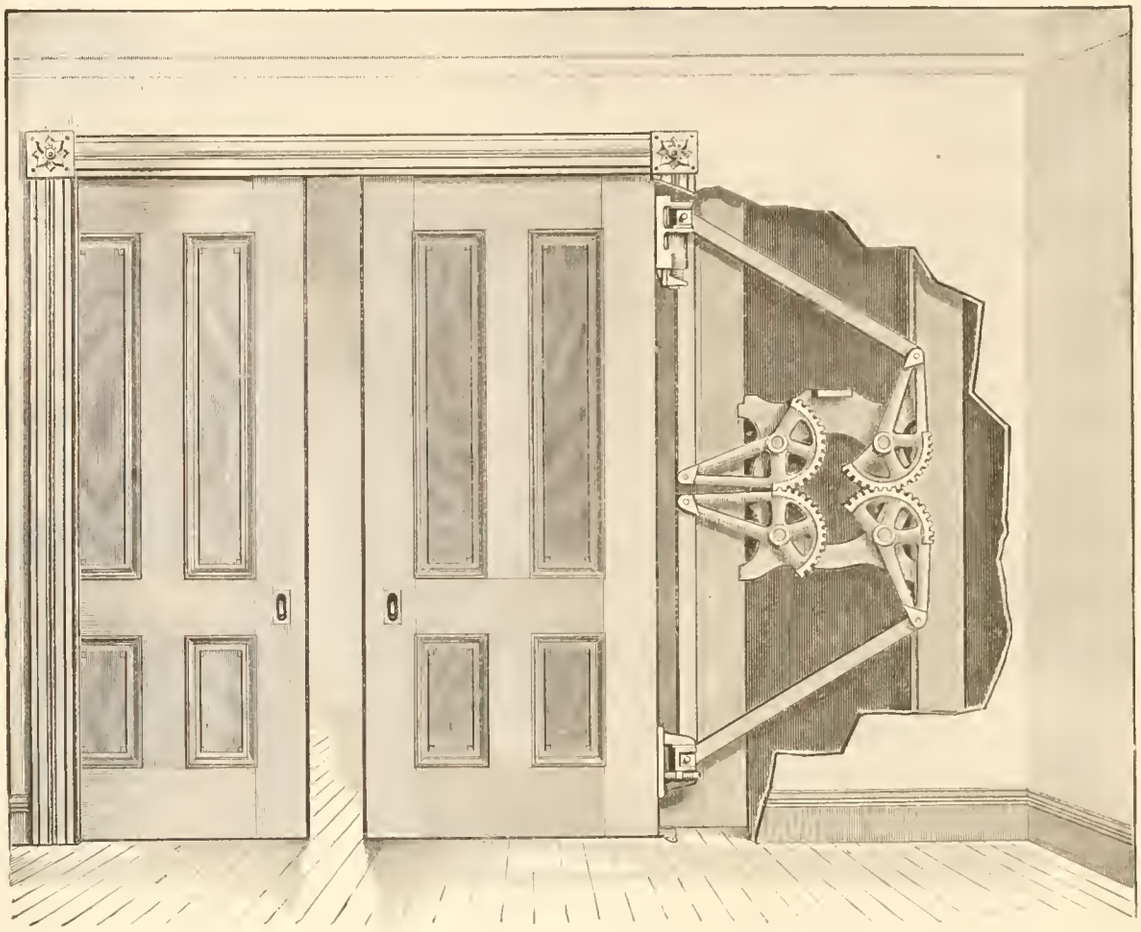

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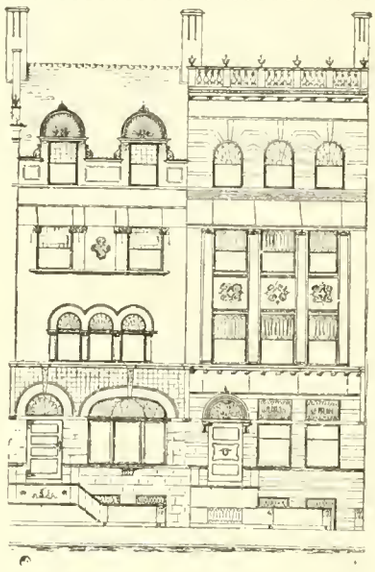

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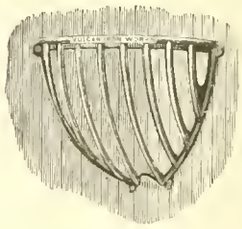

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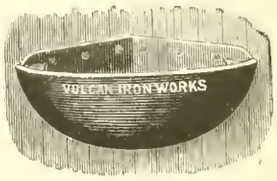

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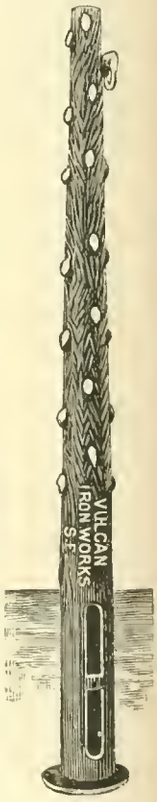

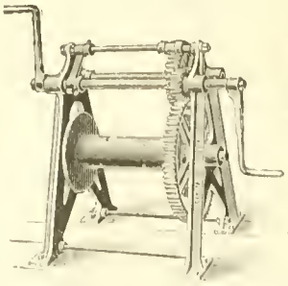

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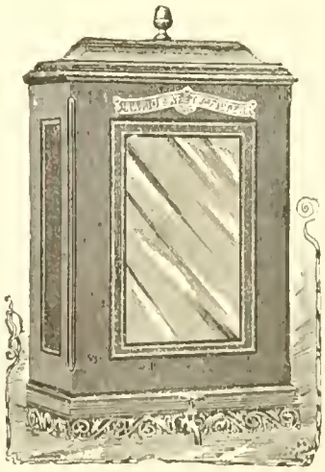

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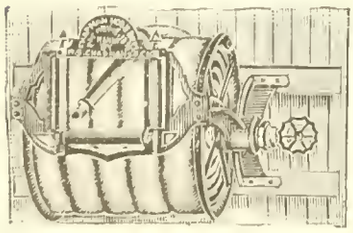

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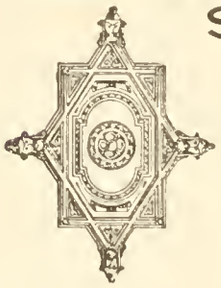

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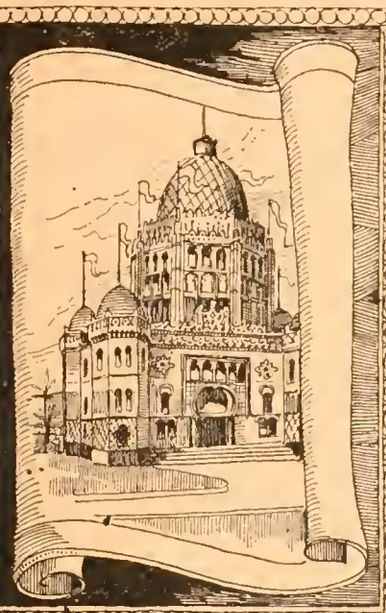

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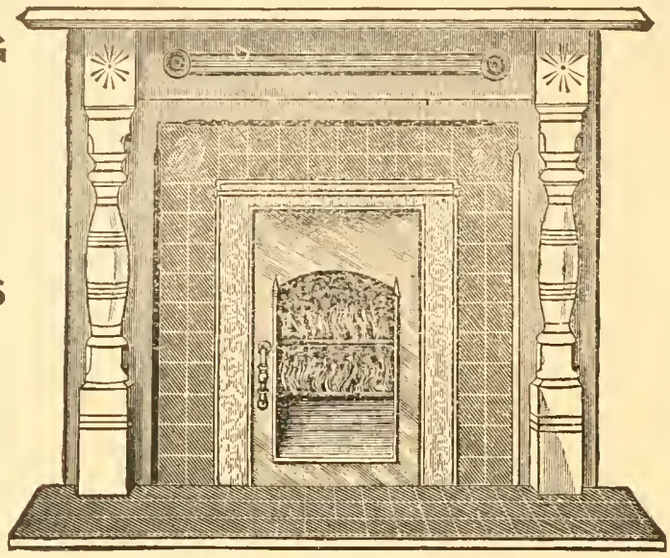

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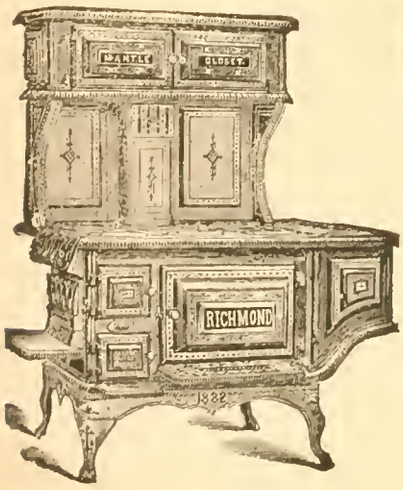

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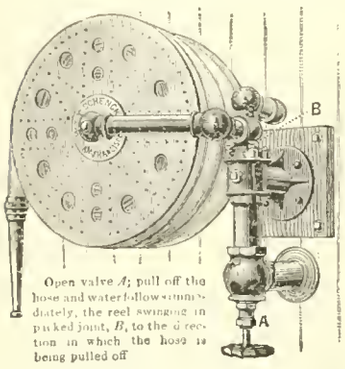

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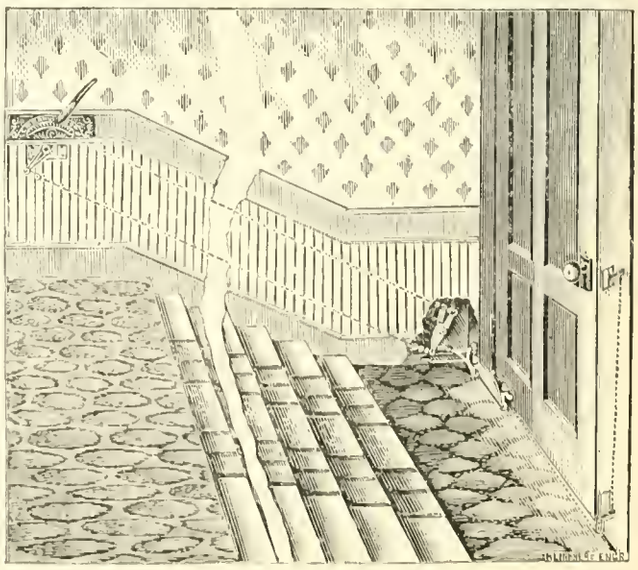

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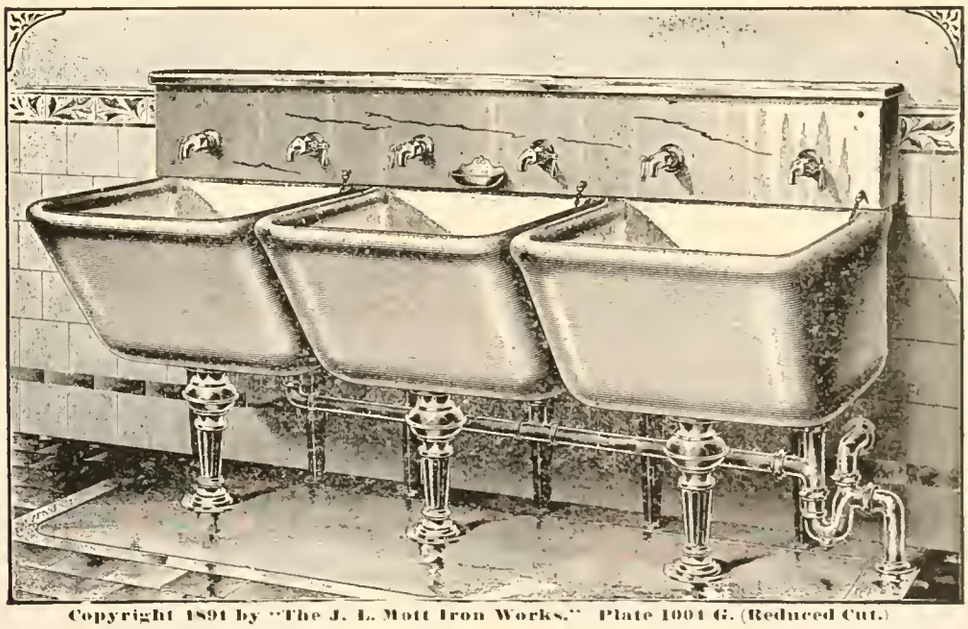

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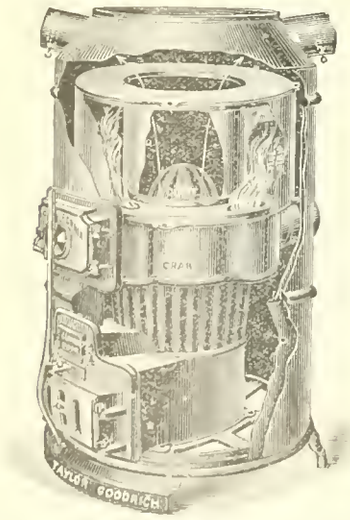

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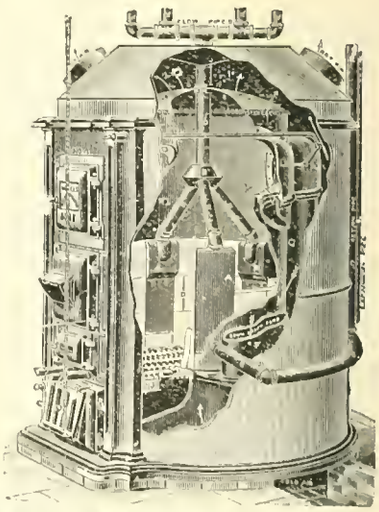

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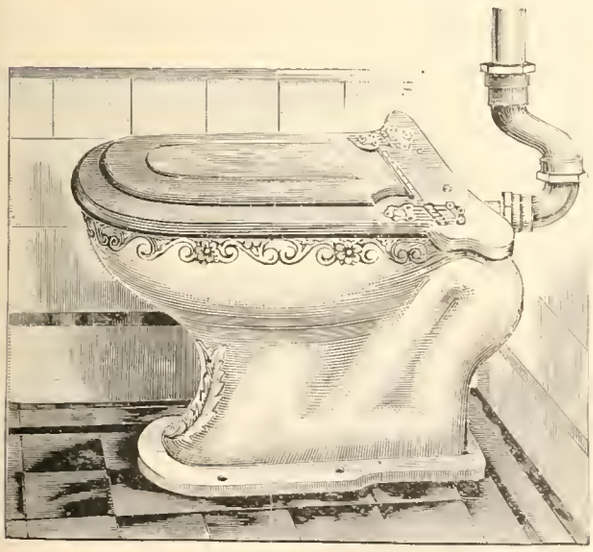

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NOTICE TO ARCHITECTS.

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PLANS AND SPECIFICATIONS will be received by the Commissioners of Fairmount Park until 12 M., October 1, 1895, for an ART BUILDING to be erected in Fairmount Park.

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A GOOD deal of friction and bitterness will probably be caused between the various parties whose interests are concerned, by the action of the Builders' Exchange in voting that their members shall not bid for the erection of any building where any of the work is segregated. The large contractors hold that to protect themselves it is necessary that they have full control of the building during its construction, and argue that the work can be advanced more rapidly, and done more satisfactorily, than when each branch of the work is made a separate contract, and performed by mechanics who pay no regard to other interests than their own.

This is certainly true on small buildings, and saves time to the owner, and annoyance to the architect; but when it comes to construct a modern building costing tens or hundreds of thousands of dollars, there are arguments to be advanced in favor of subdividing the work. The owner may have preferences as to who shall perform certain branches of the work and is desirous of chosing such parties as he has reason to believe will give the best satisfaction and do the best work, whereas the main incentive of the principal contractor will naturally be to secure the performance of the work at the lowest possible figure. The contractors for the sub-branches feel more security in dealing directly with the owner, knowing that they run no risk of having to accept a *pro rata*, that bugbear of the sub contractor.

The questions involved will, from all appearances, be brought to a test in erection of the latest improvements projected by one of our largest capitalists, and as all parties are ready for the fray, interesting developments may be confidently expected, for both sides seem to be confident of the correctness of their positions, and firm in their intentions to maintain them.

WE learn from a telegraphic dispatch published in *The Call*, that the Supervising Architect of the Treasury Department is to visit this city for the purpose of inspecting the site of our long proposed, New Postoffice Building, which of late years seems to have assumed the proportions and characteristics of other Castles in Spain. It is sincerely to be hoped that Mr. Aiken will find the site material and substantial enough to warrant him in beginning the preparations of plans for the building, but nothing short of *seeing* building operations commenced will ever make the public of San Francisco believe there is any remote future possibility of having a more suitable post office building than the tumble-down, rattle-trap of a shanty that has done service for so many decades.

THE MECHANICS' INSTITUTE EXHIBITION.

AFTER a lapse of two seasons the Mechanics' Institute is again being held—with some improvements on the old ones in the way of decoration and arrangement. The ground and gallery plans are arranged in an open and systematic way which conduces to a rapid and exhaustive survey of the whole exhibits by those who come for that purpose and at the same time affords a good *coup deil* from all parts of the building for those who come simply to lounge. The exhibit of the Arts relating to Building and Architecture is not as complete as it ought to be and it strikes us that a grouping together of all these Arts in one part of the building and arranged in classes; so that an easy comparison may be made between different materials, patents, etc., of the same description, would be a desideratum; this could evolve into a permanent museum of the Building Arts placed in one corner of the spacious pavilion, always open to the public.

Glancing over the exhibits already installed, we find in the way of building material commencing at the foundations the following:—

A fine exhibit of different sized crushed rock suitable for concrete and other purposes—as well as a part of a wall built of stone from a quarry in San Francisco which makes a fine hard blue building stone and of which the new Golden Gate Park Lodge is being built by Gray Bros., and is especially suitable for Rubble work. Marble is represented by Inyo Marble Company, who present a collection of their beautifully marked marble—good both for building and decoration purposes—while the capacities of terra cotta are exemplified by an East Oakland Terra Cotta works. Marble, granite and other stones as applied to monumental purposes are exhibited by Jones Bros.

In the Hallidee Ropeway of which there is a large and a small sized model—we have an economical means of transporting building material from their resting place in the earth to place of manufacture, and it allows of development of quarries, mines, etc., in places which otherwise would have to remain undeveloped for years. It seems to us that this might be used to advantage on buildings covering a large area in course of construction for the transportation of brick, mortar and other material from one scene of operation to others.

In the way of miscellaneous articles relating to buildings we notice saws for wood-working machinery by Pacific Saw Manufacturing Company. Building paper, including a model showing roofing paper applied to a gravel roof, and deadening felt by the Paraffine Paint Co., Asbestos by Joshua Hendy Co., and a paint and its application by the Ferre Elastic Paint Co.

In the matter of heating and ventilating, Wm. Cronan has a very creditable exhibit as well as a model of a patent Ventilated Iron Skylight—all of which is deserving of attention.

In furniture and decoration, there are some very good exhibits, those of Plum and of Fredericks standing out as attractive. Some artistic metal hanging lamps in Oriental style are exhibited by G. Benyard. We miss the always attractive exhibit of Stained Glass by Mr. John Mallon, which had become quite a feature of former fairs but are compensated for it by the extensive and good exhibit of Butterworth & Company.

In plumbing—the Furlong Cement Wash Trays offer a cleanly and durable article. Finally the Patent Swing Window turns up as usual, in what seems to be the most feasible shape yet for locking the sash and for swinging it inwards for washing purposes, including an ingenious method of fixing the inside stop of the frame. This is exhibited by the Surety Window Hinge Co., E. S. Barney, manager.

Coming to the Fine Arts we find Architecture unrepresented—sculpture in a very slight degree and painting in many cases very well. This is not as it should be and we hope before the next exhibition that an effort be made to have the Noble Art of Architecture thoroughly well and systematically represented—an Art in which the public requires to be educated more than in any other for the reason that it is one in which the choice of an architect by a client is made in ignorance more often than in other professions, the people trust to themselves and do without professional advice and in consequence the educated eye has to endure many offences against it. For which reason an exhibit of only the good in architectmre should be made in such a popular resort as the Mechanics' Fair. We hope that the Architects and the Chapters may get together and get a good collection of their works at the next exhibition—and that the directors appoint a competent hanging committee.

The other Fine Arts, those of Feeding and Draping the human body, are very well represented and it is a good sign that such important arts are not neglected, for without proper food and clothing we cannot expect to have noble architecture, sculpture or painting.

A VISIT FROM THE SUPERVISING ARCHITECT OF THE TREASURY DEPARTMENT.

WASHINGTON, D. C., Aug. 15.—Now it is the supervising architect's turn to take a junket. A representative of *The Call* had an interview with him to-day concerning the construction of the new postoffice building at San Francisco.

Mr. Aiken is a secretive official, and is careful to give out as little information as possible regarding public works. He keeps himself carefully behind closed doors, and outside of his sanctum stands a guard who has been given strict orders to rigidly exlude newspaper men.

The Supervising Architect is naturally a little bit disgruntled, because of many severe newspaper criticisms of the conduct of his office. He is also nettled because many

influential newspapers advocate a change whereby the plans for Government buildings will be awarded to outside architects, after competitive examination. It is believed that this plan will secure the best talent in the country, and Government buildings of the future may be of architectural beauty, instead of the grand, gloomy and peculiar edifices now in vogue.

Mr. Aiken is quite an independent individual, and takes care that this fact shall become known. When he was seen to-day, *The Call* representative said to him: "The San Francisco people are anxious to know when their postoffice building is going to be commenced. They have been trying for so many years and have met with so many disappointments that they are beginning to feel that it is almost a forlorn hope. But now that the Board of Engineers has reported that the Seventh and Mission streets lot is firm enough to support the structure, they would like to know what is the occasion for further delay."

The architect said: "Yes, I know all about that, I know the whole history of the matter, but we cannot perform impossibilities. There are 125 new buildings to look after, and 480 that have to be patched up continually. We will begin work on the San Francisco postoffice just at soon as possible. Next week I am going to start for San Francisco to make a personal inspection of the premises. Director of Mint Preston will accompany me, and we will stop off at Denver to examine different sites offered for the new mint to be erected there. We will then stop a day or so at Salt Lake, where is to be a new building erected. I will also visit Portland, Or., and may stop on my return at Boise. The two Idaho Senators are involved in a dispute as to the selection of a lot for the new postoffice there, and I may decide that matter myself."

Replying to a question Mr. Aiken said he thought the Seventh and Mission streets lot at San Francisco was all right, but would not state the exact nature of the business that required his presence there. The architect was asked whether or not, in his opinion, the work of construction would be commenced this fall or winter.

"The angel Gabriel can answer that question better than I," he said, "I expect to be back in Washington within thirty-five days from the time I start, and immediately upon my return I expect to begin drawing plans. You must understand that thus far only sketch plans have been prepared, and these have been published. I don't know how long it will take to finish the plans or how long it will be before the work of excavation will be begun."

The Call correspondent suggested there was fear expressed in some quarters that Secretary Carlisle was really responsible for the delay in the construction of the building, as well as other Government works, as he wanted to keep every dollar possible in the treasury in view of the state of finances.

"Yes, I know," replied the architect scornfully; "the people are not discriminating enough to lay the blame where it properly belongs—on Congress."

It was then suggested that California people were inclined to believe that there State was a little too far from the seat of Government; in other words, that they were not "in it," geographically speaking.

"I cannot help what they think," said he. "We will not favor any city because of its proximity, or neglect it by reason of its remoteness. You can wire that to your people."—*The Call.*

WHAT makes life dreary is want of motive.—*George Eliot.*

REASONABLE SKILL AND CARE.

THE phrase "reasonable skill and care" is so often used in a legal sense, and so much turns upon its meaning in the discharge of the architect's functions, that it may be worth while asking what it implies in the ordinary duties of the practitioner. When an employer claims damages from his architect for negligence or want of skill, he has to prove by attested witnesses the truth of his allegation, and of course, this is a question of expert evidence. It is not an arbitrary or fixed measure of skill, but sufficient under the circumstances of each case, which varies, as a matter of course. For example, in the design of a hospital, it would be reasonable to suppose that the architect planned his sick-wards on principles that were generally recognized; that the sanitary provisions were sufficient and convenient, that the heating and ventilation were devised upon good models. If he failed in any of these points of plan or provision, he could not be said to have shown reasonable skill. Mr. Brown is a good general house designer, but has had no experience in the planning of a free library. Would it be just to charge him with having failed to carry out the requirements of the committee? Here the question of limited experience might be urged; that the promoters knew beforehand Brown had no experience in building libraries, says *Building News*, and that they could not therefore expect him to exercise a high degree of skill in the design or plan. Such a view of the matter has been held by judges and juries, they holding that "reasonable skill" must be interpreted in a limited sense in such a case. But there is a presumption that every professional man represents himself as possessed of the requisite ability and skill. When an architect is employed to carry out any building, no matter of what description, and he undertakes the work, there is an implied warranty on his part that he is reasonably competent to the task. And this is the general and reasonable view. Mr. Tompkins, the architect, who undertakes to design Mr. Smith a house or a shop, is supposed to bring to his task all necessary knowledge and experience, and on his part Mr. Smith expects all that he has bargained for, and certainly holds Tompkins responsible for any defects in design or negligence in superintending the building. If it were not so, an employer might just as well engage a builder or a foreman of works to carry out what he wants in his own way. In the same manner, a man who was suffering from illness or some malady might save the cost of a doctor's fee by going to an apothecary, and would be himself to blame if by mischance a wrong medicine was given to him. On the other hand, if he went to any registered medical practitioner—whether or not he was a specialist matters little—he would be justified in assuming that his case would be treated with a certain or reasonable amount of skill, or that at least, his competence for the task would be assured him. If it was an eye or throat trouble, the general practitioner would, at least, prescribe safe measures that were generally followed; or, if it was too complex a case, would at once recommend his patient to go to an hospital or consult a specialist. And so the professional architect is presumed to understand the requirements of any particular building he undertakes—so far, indeed, as to protect his client against loss or damage.

One of the frequent charges brought against the architect is that of under-estimating. A client has a right to expect a certain degree of accuracy in the estimate he receives, and

if he prescribes an outside limit of expenditure, he has reason to be dissatisfied if the lowest tender exceeds that limit to any large extent. A reasonable approximation to the actual cost is certainly a question of skill. When the contract sum exceeds, say, by thirty per cent the architect's estimate, it can hardly be said that reasonable skill or care has been exercised, unless of course, as ofter happens, additions, changes, or alterations have been made during its progress. Estimating is certainly one of those branches of architectural practice about which a certain degree of skill is looked for. The Law Court reports afford ample evidence of what is expected from the architect. No doubt the profession are great sinners in this respect. The exceeded estimate is a common reproach leveled against architects, but that is no reason why they should be content to bear the brunt of a charge which is damaging to their interests, and which in many instances can be avoided. An architect is blamed for many things which are not to be placed to his charge. For instance, he cannot forsee the nature of the soil on which his building is reared. When the digging for foundations is begun, it often turns out that they must be sunk to a greater depth than show or specified, and expense of concrete or even piling may be incurred. The architect is blamed because he has not forseen this, and provided for it. His estimate has been based on a superficial examination, or on borings that have been supplied him; these turn out misleading, and his charges are disputed because he neglected to make a more thorough personal examination. In one or two cases cited the architect has failed to recover on this ground. But such charge can scarcely be said to be due to want of skill; it is merely an excusable omission on his part, which may be made up at any time without incurring loss.

Then we have supervision. What is a reasonable amount of supervision will always be a very debatable question, because some people are apt to think that every part of the building should be inspected and approved by the architect; while his nation of his duties is that he gives only a general supervision, and is not responsible for such things as improper bricks in any conceivable situation, or the stone to be laid on its natural bed in every part, nor is he responsible for the laying of drains underground or their proper jointing. The charge of want of skill or negligence may be raised by an irate client in several ways. There may be mistakes in the design in the use of materials, and it is for every architect, io the particular circumstances in which he is placed, to avoid these as far as he can. Want of skill in design is again a question depending on the evidence of experts, which may vary. Conceptions of plan, for example, would be difficult to define in many cases unless there was some glaring omission, or some self-evident want of skill—as, for instance, a hall with inadequate means of ingress and egress, a too-narrow main entrance, cramped or dangerous staircase, a dark corridor. Want of skill would arise if an architect planned a block of offices with windows too small for giving adequate light, or without considering the right of the dominant adjoining owner to obstruct. A court of law will assume, naturally, that it is the duty of an architect to make himself familiar with the law of easements, such as those of light and air and support, as his ignorance of the law may involve his client is serious litigation and loss. Examples of such cases abound in our columns of "Legal Intelligence." Every architect is presumed to know so much law as will be necessary to pertect his client's interests. There is no excuse for a professional man in London or elsewhere if he blunders in not complying with the Building Act or by-laws, and thereby puts his client to needless expense. The law will not excuse him by pleading ignorance of its provisions.

So also with respect to other matters than those directly connected with his profession. There is no excuse for him to plead ignorance of engineering. He cannot plead that he knew nothing of treacherous soils or the substrata of the site if theifoundations give way and the building settles, or thet it was a technical matter outside the architect's work. If he did not know how to provide for wet sand or clay, or what engineering expedients to adopt, such a piling, or planking, or coffer dams he should has called to his assistance someone who did. Again, if through defective design an iron girder gives way, precipitating a wall, or an iron roof collapses, causing serious injury, it will not do for the architect to exonerate himself and lay the blame on the engineer. If an arch fell in from want of sufficient abutment, as shown by scale on the drawings, the architect would certainly be held liable, and the same if any wall or column proved too weak. Perhaps in questions like ventilation and acoustics there would be more difficulty in proving incompetency. We are not aware that any legal charge of incompetence has been made out against any architect because the ventilation of his building was bad, or because the acoustical properties of a concert or lecture hall were defective. These are matters about which there are conflicting views and theories. It may indeed be affirmed generally that the term "reasonable skill and care" could only be applied to those practical and definite matters relating to building which every architect is supposed to know, and not to questions of any speculative or doubtful kinds, about which opinion would naturally vary. A wide interpretation of the meaning of the phrase would be given by any jury in some cases where, for instance the complexiiy of the building or its conditions rendered the architect not altogether responsible, and the phrase would bear a more definite meaning in connection with buildings of ordinary size and every-day use.—*Building News.*

INCREASE OF BUILDING IN THE NEAR FUTURE.

EVERYTHING points to a great increase in building operations in the near future, all over the country. In New York, which, as the centre of business, feels very promptly improved general conditions, the amount of building is already enormous. The number of permits for the erection of new buildings during the past six months, says *The American Architect and Building News*, is almost exactly twice as great as the number issued during the corresponding part of 1894, and the proportion between the intended cost of the buildings for the two periods follows nearly the same ratio. Meanwhile, the number of permits for alterations has not very much increased; showing that the hesitating season of alterations, which usually precedes a time of confident and extensive building, is nearly over, and that New York, at least, is entering on a new era of development. How soon its example will be followed by other cities remains to be seen; but nothing is more certain than that the prosperity of one part of the country means the prosperity of all; and local conditions can only in a slight degree delay or modify the change which building interests have for the last few years looked and hoped for.

THE BLAST AT PENRHYN SLATE QUARRIES.

A SPECIAL correspondent of the London *Times* writes:—Until the afternoon of Saturday, April 27, Y Talcen Mawr was the central point and perhaps the most striking feature of those famous quarries near Bethesda which have been in operation since the reign of Queen Elizabeth, and have changed half the rugged protuberance of the mountain called Bronllwyd into a deep amphitheater. Many thousands of people who have visited the quarries must carry with them a memory of the Talcen. It was a rough slab-sided obelisk of grey rock, with a bold vein of white quartz at the summit. Its height from the bottom of the quarry was about 300 feet, and it was pierced at regular intervals with tunnels representing the level of operations at various periods in the past history of the quarry. At all times this great pillow of green rock presented a picturesque appearance, whether it was viewed from above or below, for the terraces, which the quarrymen call galleries, of purple slate, rising tier upon tier, one upon another, almost to the top of the mountain, formed a singularly effective background. Opinions vary as to the reason why this upstanding fragment of a dyke which ran across the center of the quarry from north to south was suffered to remain, while the dyke itself was cut away on either side; but the better opinion is that a manager of the quarry who flourished at the beginning of the century, not forseeing the colossal scale upon which the quarry would be worked in the future, hoped that this portion of the green rock might serve as a support for one side of the quarry. But the quarry grew beyond his expectations. The quarrymen cut through the dyke on either side, and left the Talcen in obelisk, which grew more and more picturesque and more and more dangerous every day and every year as the slate rock was cut away deeper and deeper at its base.

It was in August of 1894 that, after a report from the chief agent had caused Lord Penrhyn to make a personal inspection, the Talcen was doomed, and the wisdom of the sentence was proven almost at once by the sudden fall, fortunately in the night of a fragment weighing several tons, which if it had fallen in the day, must have destroyed a large number of quarrymen. From that date till Saturday preparations for the great blast proceeded, and on Saturday the huge pillar, weighing 125,000 tons at the least, was demolished. The spectacle was imposing in the extreme. On the very brow of the quarry, fully 500 yards away from the scene of the coming explosing, and some hundreds of feet above it, a knot of privileged spectators was assembled near a flagstaff. The time was a few minutes past three. All along the brow of the quarry, and up on the slopes of the mountain above were crowds of spectators. All knew that in the bowels of the Talcen were two charges of powder, one of three tons and the other of four tons. At last the decisive moment came. The flag on the brow of the quarry was hoisted. A blue wisp of smoke from the base of the pillar, and all present knew that the triplicate fuses has been lighted, and that the hugh bricked-up chambers of powder would do its work shortly. There was a silence of expectation for five minutes or so, an interval which was almost painful; but still the wisp of blue smoke rose lazily, and a little cascade of water on the Bethesda side of the rock fell down merrily. The minutes passed very slowly, but at last—sixteen minutes and a half after the flag had been hoisted—there was a crashing sound. The noise was not so loud as one would have expected. With it came an outburst from the base of the pillar of smoke, of minute dust and of something that was either flame or red-hot powder of stone. Away from the top of the pillar sped two kestrel hawks which have nestled there for many a year. The base of the great rock seemed to fall away as water falls from a fountain jet at its highest point. There was no sign of any stone being thrown to a great distance. Then, in less time than these words occupy in the writing, but in orderly sequence none the less, there was the roar of huge masses of stone rolling one upon another, and with it came the spectacle of the huge rock sinking and subsiding with a slowness that was almost majestic until it was a mere chaotic mass of boulders reeking with smoke, quivering and gliding downwards for many minutes like an avalanche. Another minute followed, and then the whole of the quarry was vested in a cloud of heavy and evil-smelling smoke, of which however, the keen wind made short work.

MR. RICHARD MORRIS HUNT.

THE profession of architecture, not only in this country, but throughout the world, has suffered a great loss in the death of Mr Richard Morris Hunt, which occurred at his country house at Newport on Wednesday. Mr. Hunt was born at Brattleboro, Vermont, October 31, 1828, of a distinguished family. The sons of this generation seem to have been endowed with artistic talent in a remarkable degree, for a brother, the late William M. Hunt, became one of the most noted painters that this country has ever produced. Richard, while yet a very young man, was sent to Europe to complete his education, and, while there, was taken with a fancy for architecture. With characteristic energy, he prepared himself for entrance into the School of Fine Arts in Paris, remaining there for about seven years, under the great Lefuel: On leaving the School, he travelled extensively, and, returning to Paris, was invited by Lefuel, who was then engaged in building the wings connecting the Tuileries and the Louvre, for the Emperor Napoleon III, to become his assistant. He accepted the invitation, and is reputed, according to the tradition among New York architects, to have designed many of the details of the building, including the entrance archway from the Rue de Rivoli to the court-yard. At this time, Hunt was much more a Frenchman than an American. At the time that he entered the School of Fine Arts, he was, we think, the only American in the School, or, at least, in the Department of Architecture, and he was identified with French architectural design, and French architectural practice, until his work on the Louvre was finished. Returning then to America, he was employed for a time by Dr. Walter on the extension of the Capitol at Washington, and then entered into practice on his own account in New York. Although comparatively rich, both by inheritance and by marriage, he worked assiduously and ardently in his profession, and designed and carried out an immense number of fine buildings. In New York, those which occur to us at the moment are the Lenox Library, on Fifth Ave., the *Tribune* Building, on Printing-house Square, the W. K. Vanderbilt house, on Fifth Ave., the Osborne house, on Park Ave., a hospital near Third Ave., the Marquand house, and many other dwelling-houses, besides several mercantile buildings on Broadway and elsewhere; and the pedestal to Bartholdi's Statue of Liberty; besides the Vanderbilt Mausoleum, on Staten Island, and a large number of monuments. In Newport,

he built many splendid country houses, including the so-called Marble Palace, belonging to Mrs. W. K. Vanderbilt, and the magnificent Goelet house, reputed to have cost a million dollars. In Boston, his work is represented by the two Brimmer houses on Beacon street. At Asheville, North Carolina, he was engaged, at the time of his death, in the completion of an immense house for another of the Vanderbilt family. In the assignment of the work for the Chicago Exposition, he was given the principal place, by being asked to design the Administration Building, and all the world knows how he succeeded. Before that time, however, his great talents had long been recognized in the profession. He had been repeatedly elected President of the American Institute of Architects, to whose interests he devoted the most earnest and wise attention, both in office and out of it; and was decorated many years ago with the cross of the French Legion of Honor. Later, the French, who seemed to have followed his career with an affectionate interest, which was fully returned on his part, raised him to the highest honor that could be bestowed on a foreign architect, by making him Corresponding Member of the Institute of France, in the Section of Fine Arts; and similar honor was recently done him on the other side of the Channel, by the Royal Institute of British Architects, in the award of the Royal Gold Medal.—*The American Architect and Building News.*

AN INTERESTING PIECE OF FOUNDATION WORK.

AN interesting piece of foundation-work has been going on in New York, at the corner of Exchange Place and Broad street, where a sixteen-story office-building is to be erected for the John Taylor Johnson estate, says *The American Architect and Building News.* The soil at this point is a stiff clay, mixed with gravel and boulders, and resting on rock, at a distance of about forty feet from the surface. As usual in New York, where such lofty buildings are to be erected in the lower part of the town, caisson foundations are used, but the method of sinking the caissons is novel. Instead of forcing air into them, so that the earth can be excavated under them, the work of sinking them is performed mainly by water-jets, directed in a very ingenious manner. Around the lower edge of the caissons, which are of the usual form, and proportioned in size to the weight which is to come upon them, are fixed hollow castings, each of which is pierced with a row of holes, about one-eight of an inch in diameter. Pipes, descending on the outside of the caisson, enter the castings, and convey to them water, at a pressure at a hundred pounds or more to the square inch. The water issues in jets from the holes in the castings, washing away the earth from under the edge of the caisson. Around the lower edge of a caisson of moderate size there are something like a thousand of these jets, and their combined effect loosens the earth so effectually as to allow the caisson to sink rapidly. The movement is hastened by loading the top with iron weights, and by exhausting the air from the interior; and it is said that a caisson can be sunk forty feet in about a day, including all the delays incident to testing and rectifying the movement, and riveting together the three sections of which each caission is made. As might be expected, the sections do not sink with perfect accuracy, and the work must be stopped at intervals to apply gauges, and modify the current through the water jets, until the necessary correction is made. In most cases, this is all the rectification required, but when the descending edge of the caisson meets a large boulder, it is sometimes necessary to apply a special treatment, which consists in directing a jet of water upon the earth below the the boulder, and a little outside of it. This jet soon excavates a hole, into which the boulder falls by its own weight, out of the way of the descending caisson. After the caissons are sunk to the rock, they are excavated in the usual manner, the surface of the rock trimmed and leveled if necessary, and concrete and masonry put in, filling them to the top. As soon as the concrete has set, the foundation is ready to receive the superstructure. As usual with modern caissons foundations, the steel cylinder is intended to serve only as a form in which to mould the concrete pier, which is the real support of the building, so that the metal may corrode away at any time, after the concrete has set, without diminishing in the least the security of the structure. Compared with the older method of making caisson foundations, the new one, which is the property of the Hydraulic Construction Company, has great advantages in point of rapidity, the sinking of a caisson being a matter of a few hours, instead of several weeks.

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

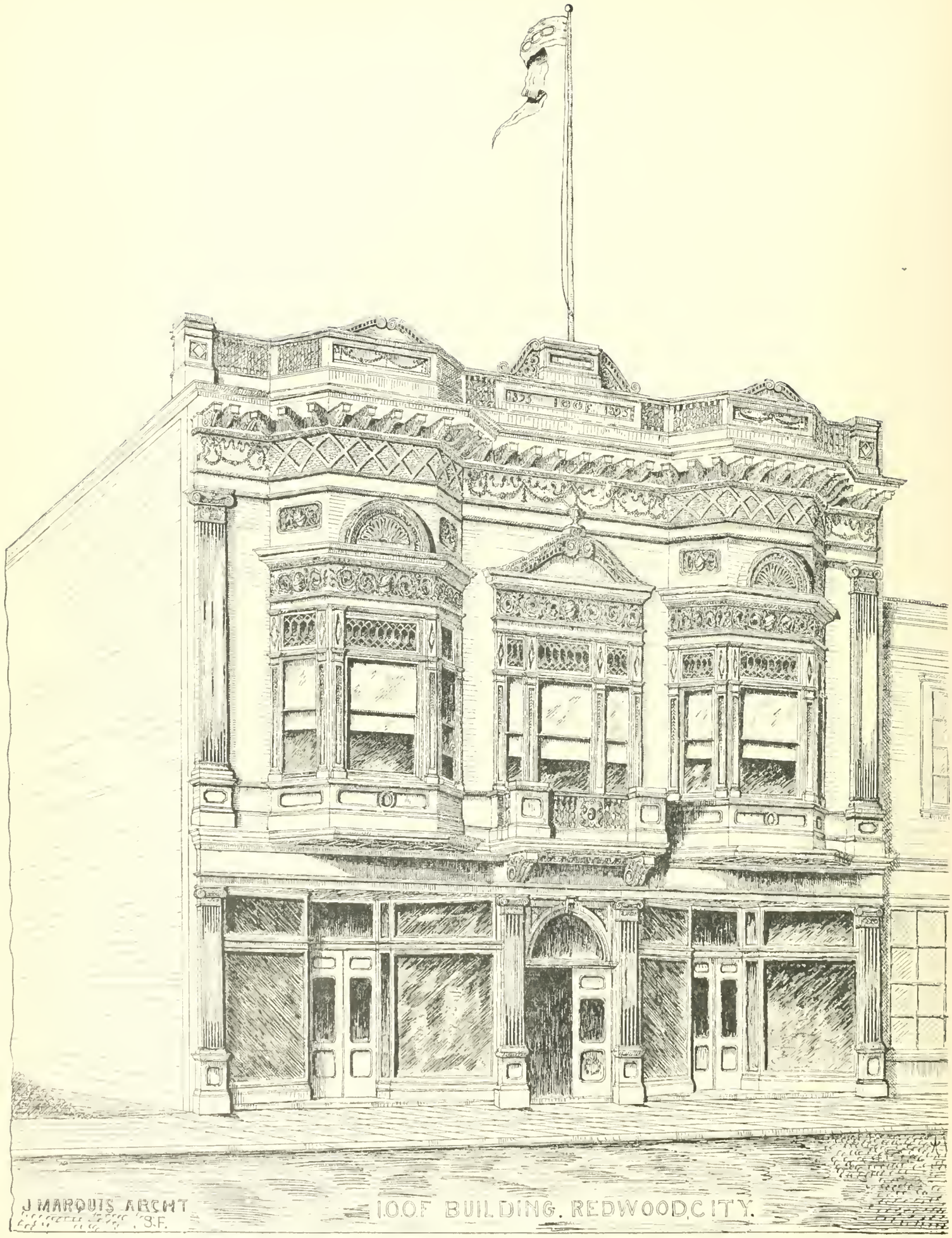
TUDY for a Village Inn, Havens & Topeke, Architects.

I. O. O. F. Building, Redwood City, J. Marquis, Architect.

OUR double plate shows the new building to be erected by Claus Spreckles, on the corner of Third and Market streets, in which *The Call* is to make its home.

SAN FRANCISCO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

AT the August meeting of the San Francisco Chapter of the American Institute of Architects, officers for the coming term were nominated, to be voted for at the annual meeting in September. A full attendance of members is requested at that meeting.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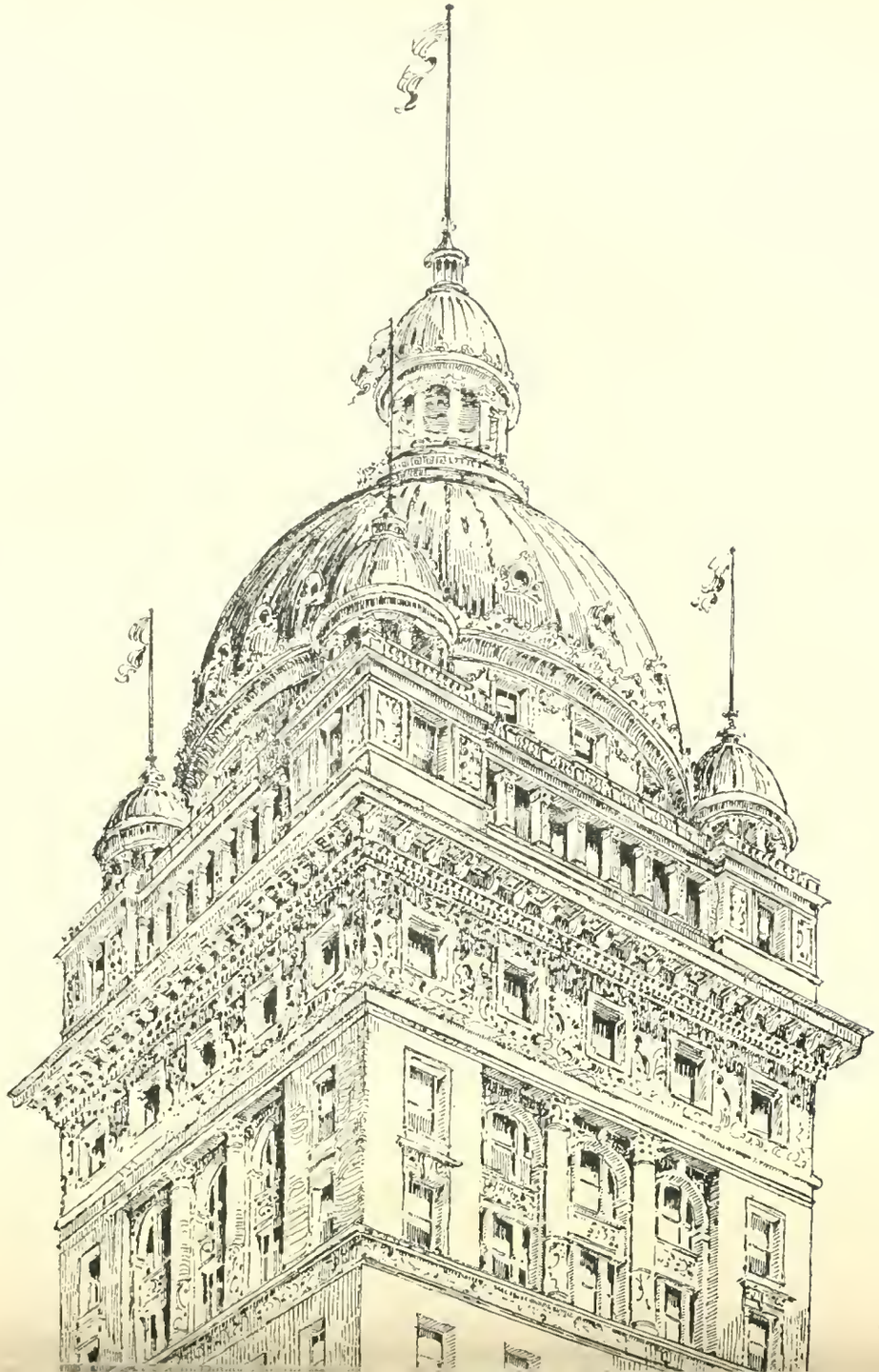
J. MARQUIS ARCHT
S.F.
I.O.O.F BUILDING, REDWOOD CITY.



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"VILLAGE INN."
:HAVENS & TOEPKE: ARCHTS.:
TANKARD
W.H. TOEPKE
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TAYLOR COL. AUG. 1940

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 108 California street.
Seth Babson, Pres. Geo W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 111 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

ARTIFICIAL WEATHERING TESTS OF BUILDING STONES.

A paper by Mr. Lea McI. Luquer in the Transactions of the American Society of Civil Engineers for March of this year raises a question in connection with the tests of building material which we discussed in these columns more than two years ago. As Mr. Luquer observes, the artificial testing of endurance of building stones exposed to the atmosphere, by means of the formation of crystals of some suitable substance in their pores, has for many years come to be regarded as satisfactory, although he raises the question which we pointed out in our former comments on this subject, whether the artificial procedure can be considered equivalent to the natural process of weathering. It is almost certainly not exactly equivalent, but we think it is a question well worth considering whether it is even approximately so. No theoretical considerations are sufficient for the determination of the physical forces developed or the changes produced in the material by them.

It is not impossible that small chemical reactions, at least, may take place in the material of some stones when treated by the sulphate of soda of similar processes, although it is improbable that such effects often result to an appreciable extent. Leaving out of account, however, all such influences, there still remains the fact that the destructive effects produced by the formation of ice in the small interstices of stone are almost certainly not identical with those induced by the formation of the crystals of such chemical substances as sulphate of soda. It may of course be said that while considerable inequality in these results may exist, yet the destructive effects of artificial crystallization may furnish a basis for a comparative or quantitative inference in regard to the weathering capacity of any given material. This is probably true, and the observations would possess practical value were there in existence actual data establishing the desired relation. As a matter of fact no such relation has yet been established for any stones, natural or artificial, and hence the results of artificial crystallization are, to a large extent at least, of suppositive value as establishing probable relative capacities among a given set of stones.

Again, there is a class of weathering effects due to the action of the sun and resulting from alternate expansions and contractions, to say nothing of slow possible chemical actions, of which no artificial process of crystallization can give us any measure. It is seem, therefore, that the latter class of tests fail in some very material characteristics of furnishing to the engineer such a measure of weathering endurance as he should desire or demand.

We do not make these observations in the line of hypercriticism, because we recognize the fact that the engineer, like everyone else, must always use the best means at his command to accomplish any desired end, although those means may fall very short of meeting the conditions which he fully recognizes. Mr. Luquer's admirable paper shows conclusively what has been at least partially recognized before—viz., that the sulphate of soda process is much more severe in its effects on the considerable number of stones which he tested than the same number of alternate freezings and thawings, and to an extent which varies widely with stones of different texture. While, therefore, the sulphate of soda and similar processes may and do give valuable information to the engineer in regard to certain weathering properties, and while such tests must necessarily in some cases be the only endurance tests available, their results should in all possible cases be supplemented by the effects of actual weathering exposure wherever possible. Indeed it is probable that there is no better measure of resistance to weathering by building stones, when available, than that exhibited by the outcrop of the quarries which have been exposed to all weathers and all seasons through perhaps centuries of time. On account of the varying qualities of stone in the same quarry this test is obviously unusually unavailable, but engineers with a very little forethought and trouble may accumulate in the course of a few years data in regard to the weathering properties of natural and artificial stone of a most valuable character by submitting specimens to continuous exposure under such conditions as will develope effects of sun, frost, and other influences which act on the exposed faces of buildings. The accumulated data of such investigations as that of Mr. Luquer, and others of a similar character, would then perhaps in time give us the desired relation between the artificial and natural methods. In the meantime provisional methods must be employed for what they are worth, but with caution, in the hope that both architects and engineers may give the subject much more attention than it has yet received.—*The Engineering Record.*

THE STONE-WORKER'S FUTURE.

In looking forward to the probable developments of the next few years it appears to one who has personal contact with the pulse of invention, that we will make very great strides in the perfection of stone-working machinery of an entirely new type. There are, as it were, periods or waves of improvement. The pneumatic tool marks one of these waves, being one of the inventions that stamps its character upon every class of the industry. It marks an era in the craft. The time is fast approaching when we will feel another wave of progress, and it will also make its mark upon every class of the craft.

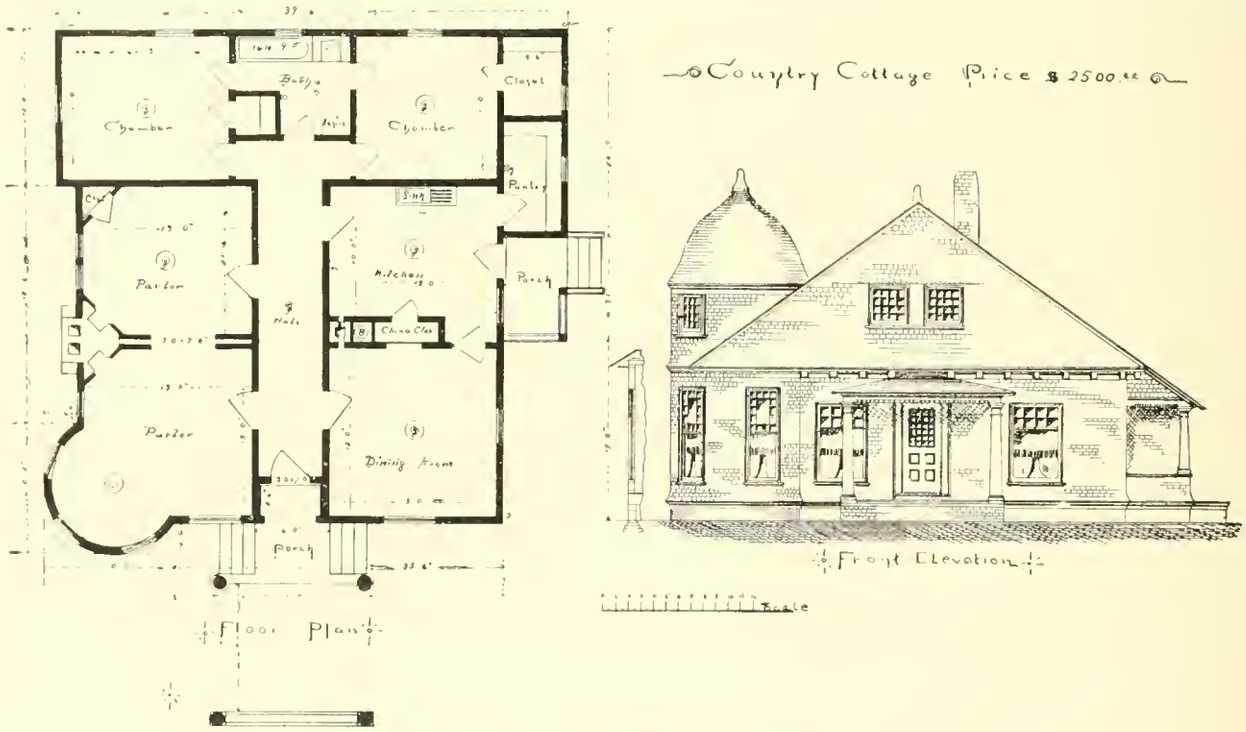
But a ten minutes walk through a modernly-equipped stone works reveals to the thoughtful mind, many places where both labor and time are wasted, and are unproductive. And as competition becomes more severe labor and time are the great items upon the expense side of the ledger, and anything that tends to save these becomes a chief factor in a successful business enterprise. Only a week or two

ago I had a long and interesting talk with the owner of one of the oldest and most important steam stone works of New York City, and the conversation turned mainly upon this very theme, the mechanical saving of labor and time in the dressing of building stone. When he was young in the business, good work was all that was needed to fill up a fat order book, but now it requires a close cost estimate. And this is truer as the years pass by.

In the first place, it occurs to a practical mind that the cutting of stone as it is done now is entirely too slow a process. And the machinery is too expensive by all means. From five to ten thousand dollars is entirely too much to spend for a saw cutting little more than a quarter of an inch per minute. Again, dimension work must be put through faster. The cuts should follow rapidly, and the measurements be made by mechanical means. Cutting and trying is a relic of the days when carpenters hewed beams with adzes. Measuring and squaring should be absolutely under mechanical control. Gang work should be done at high speed. Planers must work faster and be automatically operated. Tools must be invented to do special work automatically from pattern, and without waste of stock. I expect to soon see arches cut without any waste of material within the segment.

In fact there are great lessons for the worker in stone to learn. Some of them can be found in any well-equipped wood-working shop, and in machine shops. Is there any reason why the same principles cannot be applied to the working of stone? It is not because stone is heavy, for in the Washington Navy Yard I have watched the handling of a hundred ton cannon with as much ease as though it were a Napoleon. Steel is as hard as granite. The real secret is that the inventive mind has not taken hold of the entire problem as yet. The rapid manipulation of stone will be a fact when proper attention is focused to that end.—*Edw. C. Weaver in Stone.*

A WEAK mind is like a microscope, which magnifies trifling things, but cannot receive great ones. —*Chesterfield.*



J. J. & T. D. NEWSOM, ARCHITECTS.

BOOKS AND PERIODICALS

We have before up the Catalogue of the EIGHTH ANNUAL EXHIBITION of the Chicago Architectural Club Art Institute, Chicago, May 23d to June 10, 1895. Among other illustrations is the competitive design for the gold medal of the Illinois Chapter A. I. A. by J. W. Johnson.

This Catalogue is neatly printed on good paper, many of the sketches are very creditable to the artist, and show that the club is doing good work in the cause of Art.

A new magazine called GRANITE PRODUCER AND BUILDER, devoted to the interests of quarries, manufacturers and sculptors of granite and marble as used for monumental or building purposes. This magazine appropriately dressed in a granite color cover is published by Ladd, Hunt & Co., 131 Devonshire street, Boston, Mass.

It contains some handsome illustrations, among the number a panel carved in granite that makes a very striking figure, we should judge it must be a valuable work for those interested in this line.

COMPRESSED AIR and the Clayton Air Compressors, complete catalogue No. 8, Havemyer Building, Cortlandt, Church & Dey Sts., New York; it is not our custom to review trade catalogues, but make an exception in this case because of a valuable article upon "The Wide Use of Compressed Air" which the volume contains, calling attention to the many uses that at the present time compressed air is applied to that cannot fail to be of interest to constructing engineers.

PAINTING IRON BRIDGES is by Walter G. Berg instead of Walter G. Bery.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

WHEN ORDER OF CONTRACTOR TAKES PRECEDENCE OF LIEN.—An order given by the contractor on the owner in good faith, and for a valuable consideration, before notice of a material man's lien is given, takes precedence of such lien.

Newman v. Levy, Supreme Court, General Term, Second Department, 32 N. Y. Sup. Rep. 557.

STATEMENTS OF CONTRACTOR'S SON.—A statement by a contractors's son, while working for his father, in the latter's absence, that the time for filing a mechanic's lien for certain work had expired, does not bind the father, where the son was not authorized by him to make the statement.

Alexandria Bldg. Co. v. McHugh, Appellate Court of Indiana, 39 N. E. Rep. 877.

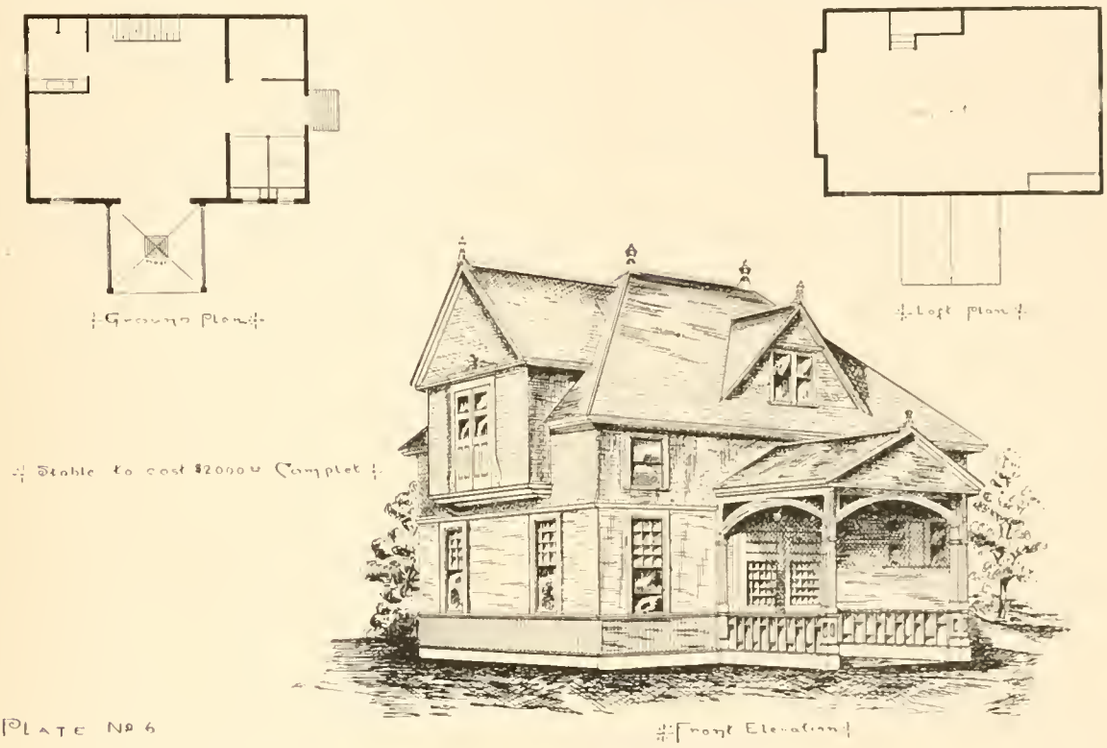


PLATE No 6

J. J. & T. D. NEWSOM, ARCHITECTS.

ACCEPTING SERVICE OF NOTICE.—In proceeding by the original contractor to enforce a mechanics' lien against the owner of the land, no rights of subsequent purchaser intervening, the owner by accepting service of a copy of the statement in lieu of the statutory service, before the time had elapsed within which the statutory service could have been made, is estopped to assert that the service was not made in the statutary manner.

Mount v. Fisher, Supreme Court of Michigan, 62 N. W. Rep. 338.

IRON BUILDING CONSTRUCTION.—The thirteenth claim of the Buffington patent, for "improvements in iron-building construction," being "the combination, with the posts and girts, of the angle plates connecting them, and forming supports for the veneer shelves," does not include a claim for the idea of supporting horizontal sections of masonary veneer on the iron framework of a building, or the combination of such veneer and the shelves supporting it with the iron frame, merely because shelves and veneer supported thereon in horizontal sections are described in the specifications of the patent.

Buffington's Iron Bldg. Co. vs. Eustis, Circuit Court of Appeals, Eight Circuit, 65 Fed. Rep. 804.

NO LIEN FOR DAMAGES FOR BREACH OF CONTRACT.—Under the laws of New York, a contractor has no lien for damages sustained by him by reason of a breach of contract by the owner, but is confined to the value of his labor and the materials furnished.

Wolf v. Horn, Com. Pl. N. Y. City, 33 N. Y. S. Reporter, 173.

MEASURE OF DAMAGE FOR FAILURE TO COMPLETE CONTRACT.—When a contractor fails to complete a building, and the owners take possession and do so, the measure of damages will be the amount of the paid contract-price, less the fair and reasonable amount the owner had to pay to complete the work.

Mills v. Paul, Ct. Civ. App. Tex., 30 S. W. Reporter, 558.

ARCHITECT'S LIEN FOR PREPARING PLANS, ETC.—The Circuit Court of the United States (Northern Dist. Ohio, has decided that, a statute giving a lien to a person "who performs labor or furnishes machinery for erecting, altering, repairing or removing a house by virtue of a contract," etc., includes not merely those performing manual labor, but extends to the labor of an architect in preparing plans and specifications, and in superintending construction, where it appears that such plans and specifications were prepared with a view to the particular location where the building was actually located, and in pursuance of a contract having a substantial financial basis.

The Judge said:—"There is no reason in equity or law why the architect who conceives and puts upon paper the design of such an immense building as that involved in this case, and who puts upon paper with such minuteness of detail the specifications and drawings as to enable any one skilled in such business to erect, with perfect proportions and proper stability, such a mammoth structure, should not be protected in his contribution to the completion of such work, as well as the carpenter, the plumber, the painter, or any one who performs manual labor.

"The Court ought certainly not to strain the statute to exclude labor of this high character and grade, unless it is plainly the intent of the legislature that it should bear such interpretation. The architect in this case is entitled to a lien not only for the plans and specifications, but for the labor and assistance in the construction of the building in pursuance of these plans."

Phœnix Furniture Co. v. Put-in-Bay Hotel Co., 66 Fed. Rep. 635.

ATTORNEYS' FEES FOR SECURING LIEN.—The Supreme Court of Montana holds that: A law providing that in an action to enforce mechanics or other liens, the party if successful shall recover a reasonable attorney's fee and costs is constitutional.

Helena Steam Heating & Supply Co. v. Wells, 40 Pac. Rep. 78.

OCCUPATION TAX ON ARCHITECTS.—Acts 1883, imposing an occupation tax on architects, was not repealed by Acts 1889, or by Acts 1891, both of which provided for state and county revenues. The occupation of an architect can be made the subject of a privilege tax.

Cook v. City of Memphis, Supreme Court of Tennessee, 30 S. W. Rep. 742.

BUSINESS MOSAICS.

Rock Asphalt—In another part of this issue will be found an advertisement of a quantity of the celebrated and widely known Neuchatel Rock Asphalt Mastic, which is so extensively used in New York, Chicago, and all the other large Eastern cities, as well as in Europe, for laying side walks, fire-proof floors, etc. It is peculiarly adapted for water tight floors in stables, sanitary cellars, and for other similar work, and anyone desiring an article that will meet their requirements for the above purposes cannot do better than by using this asphaltum.

The lot now offered for sale is the genuine product from the Neuchatel Valley, Switzerland, and is the balance of a shipment received here some time ago, but parties ordering having failed, it has been held in store pending sale. Owners having determined to dispose of this balance at an early date, have now authorized their representatives here, Messrs. Williams, Brown & Co., 116 California St., to make a specially low figure to that end. The attention of all in the trade is drawn to this article as the cheapest and best for the purposes above stated.

Wife—"Dear, dear! What can you be dropping oil on your best coat for?" Husband—"I bought a bottle of stuff to-day to take out grease stains with, and I wanted to see if it was any good."—*News Letter.*

As the windy season is almost over it is time to think of having your house repainted, therefore a few facts about paints do not come out of place. The Phœnix pure paint, manufactured by W. P. Fuller & Co., is certainly an article that fills the bill; its extensive use upon the Pacific Coast for the last five years proves that it is what is claimed to be by the manufacturers. Without pure materials how can you expect good work? Note what is guaranteed: "Absolutely pure and satisfactory on the building or we will replace it with any material the architect may select."

New Customer—"Is that your dog?" Barber—"Yes, sir." New Customer—"He seems very fond of watching you cut hair." Barber—"It is not that, sir. Sometimes I make a mistake and take a little piece of a gentleman's ear.—*Tit-Bit.*

The fact that cement has been gaining in favor for foundations, sidewalks, etc., is self evident to every one interested in the welfare of our city. When you order cement why not order the best, to this end why not order from W. R. Grace & Co., 203 California street, you will certainly be satisfied with "Josson" or "White Starr," but as you pay your money you can take your choice of many other brands they have on hand.

"What a talker Mrs. Frakshus is!" exclaimed Mrs. Dinwiddie. "Yes," replied Mr. Dinwiddie; "even her teeth chatter."—*Life.*

A. Steiger Sons.—This concern has proved itself fire proof, for notwithstanding the destruction of their works by fire, business has been continued with renewed energy, any thing in the way of Architectural Terra Cotta, etc., will be found in stock, or manufactured to order. Orders can be left at the office in San Jose, Postoffice Box 1025, San Francisco office, Builders' Exchange, Post street, room 16.

Heating and Ventilation, 27 New Montgomery street. Mr. Wright having purchased his partners interest will continue to furnish estimates for the heating and ventilation of buildings of any size, either by steam, hot water, warm air, or by combination of hot water and warm air. As the importance of good ventilation, combined with a comfortable heat is daily becoming more in use, people desiring pure air are more inclined to pause before ordering a hot air furnace, the right thing to do is to consult some one who makes a business of this art, surely it is an art; Mr. Wright is the man to apply to. Judge Murphy might not now be on the sick list, if Mr. Wright had ventilated the Court Room.

Mr. Brice must have lost his hat. He is now talking through his secretary.—*Cleveland Leader.*

If you need water only when the wind blows; if you are satisfied to utilize but a small fraction of the water in your well, if you prefer heavy bills for repairs after each storm in winter, by all means use a windmill; but if you want water at any time, and up to the full capacity of your well, put in the Ajax Coal Oil Gas Engine, the latest thing in mechanics, an engine that uses common coal oil for fuel, and is built by the well known firm of Palmer & Rey, San Francisco, Cal.

He—"My views of bringing up a family are—— She—"Never mind your views; I'll bring up the family; you go and bring up the coal."—*Halifax Herald.*

San Francisco Lumber Co., wholesale and retail; the readers should be reminded that their principal office has been removed to the foot of Third street, uptown office for orders 405 Montgomery street, cor. California. The yards, foot of Third and Channel streets south side bet. Fourth and Fifth streets, contain almost everything the contractor and builder may require, the fact that Mr. J. N. Curtis is manager is enough to insure fair treatment and prompt delivery of orders.

The Teacher—"Now, who can tell me which travels the faster, heat or cold?" Johnie Bright (promptly)—"Heat, of course. Anybody can catch cold."—*Pathfinder.*

W. W. Montague & Co. is the place to go, if you wish anything in the way of mantels, grates or tiles. Before you leave their establishment it will be well to look over the large stock of most everything in the way of heating apparatus; it may be hard to make a choice among so many desirable articles that add to the comfort of house-keeping, but when you leave the store you will go with the idea that San Francisco has establishments equal to any other city.

Architect's Wife—"What makes you so bad tempered to-night, John?" Architect—"I don't know; unless it is because I was drawing some cross-sections this afternoon."—*Drake's Magazine.*

The Improved Chapman Fire Hose Reel is what you want if you want the best. At 14 and 16 Fremont street you will find Mr. R. S. Chapman, late Fire Surveyor for Board of Underwriters, what he doesn't know about hose is not worth knowing. Call and be convinced.

ALAMEDA FREE LIBRARY.

CITY BUILDING NEWS.

All work for schooner for the American Board of Commissioners for Foreign Missions; architect, Hugo P. Frear; contractor, Geo. W. Kneass; signed, July 3; filed, August 2; cost $4250.

Bartlett near 22d. To build; owner, M. J. Dempsey; contractor, H. Munster; signed, July 20; filed, July 25; cost $2400.

Belvedere near Fredrick. To build; owner, W. Hinkle; architects, Hermann & Swain; contractors, Peterson & Person; signed, Aug. 8; filed, Aug. 9; cost $3075.

Bluxome near Fourth. To build; owner, J. F; Hill; architect, E. A. Garin; contractor, D. R. W. Smith; cost $4000.

Bluxome near Fourth. Stable buildings; owner, Overland Freight and Trans. Co.; architect, S. O'Brien; contractor, M. Bagey; cost $1800.

Brannan near Fourth. To build; owner, A. Steinmetz; contractor, W. Bell; cost $900.

Brannan near Fifth. Mason work, etc., on brick warehouse; owner, Ed. Niehans; architect, B. J. Clinch; contractor, J. Wagner; signed, July 13 filed, July 15; cost $2500.

Brannan near Fifth. Furniture factory; owner, C. Reichling; contractor, C. Klein; cost $2000.

Brannan near Fifth. To build; owner, F. Huber; contractor, F. W. Steinmann; cost $2000.

Brannan near Fifth. To build; owner, R. Herring; contractor, M. J. Gallagher; cost $2000.

Brannan near Fourth. To build; owner, Herman Harms; architects, Martens & Coffey; contractor, J. Bucher; signed, Aug. 6; filed, Aug; 7; cost $7210.

Bryant near Tenth. Engine House; owner, City of San Francisco; contractor, W. H. Wickersham; cost $5345.

Bryant near Centre Place. Alterations and additions; owner, Jas. Mahoney; architect, J. E. Krafft; contractor, P. J. Brennan; signed, July 22; filed, July 24; cost $1398.

Bryant near 23d. Cottage; owner, Bessie J. Hetzer; architects, Hermann & Swain; contractor, H. Jacks; signed, July 16; filed, July 16; cost $1582.25.

Bryant near Fifth. Brick building; owner, John Horstmann; architect, H Geilfuss; contractors, Miller & Beck; signed, July 17; filed, July 17; cost $3695.

Bryant near Fifth. Carpenter and iron work; owner, John Horstmann; contractors, Hood & Watson; signed, July 17; filed, July 17; cost $4675.

Broadway near Gough. To build; owner, Mrs. Maggie Hockstadter; architect, M. J. Lyon; contractor, R. Sinnott; filed, July 24; filed, July 24; cost $6200.

Bush near Laguna. Mill work on church; owner, Congregation Ohabae Ohalome; architect, M. J. Lyon; contractor, H. Rohling; signed, July 3; filed, July 18; cost $2600.

California and Montgomery. Iron work; owner, Cal. Safe Deposit & Trust Co.; architect, H. A. Schulze; contractors, Union Iron Works; signed, June 24; filed, July 13; cost $17 174.

California and Montgomery. Boilers, engines, etc.; owners, Cal. Safe Deposit & Trust Co.; architect, H. A. Schulze; contractors, Risdon Iron & Locomotive Works; signed, June 24; filed, July 13; cost $5800.

California and Montgomery. Sidewalk lights; owner, Cal. Safe Deposit & Trust Co.; architect, H. A. Schmitz; contractors, Keatinge, Leonard & Co.; signed, June 5; filed, July 27; cost $3630.

California and Baker. To build; owner, Kate A. Adams; contractor, W. W. Redhall; signed, Aug. 2; filed, Aug. 3; cost $3575.

Casell Ave. To build; owner, J. A. Bigger; contractor, Josiah J. Rose; signed, July 31; filed, Aug. 3; cost $1426.

Chattanooga St., No. 12. Additions; owner, P. Coughlan; contractor, T. C. Cochrane; cost $1000.

Cherry near Sacramento. To build; owner, P. A. Peshon; architect, August Lund; contractors, Dahlberg & Lund; signed, July 20; filed, July 22; cost $3500.

Cliff House. Enclosing porches with glass; owner, Adolph Sutro; contractors, Campbell & Pettus; signed, July 25; filed, July 25; cost $2770.

Cliff House. Extra floor in attic; owner, Adolph Sutro; contractor, Campbell & Pettus; supplement to contract filed April 13; cost $420.

Cliff House. Diagonal boarding; owner, Adolph Sutro; architects, Colley & Lemme; contractors, Campbell & Pettus; cost $1661.

Clipper near Sanchez. Cottage; owner, Geo. S. and Annie Knowles; architect, T. J. Welsh, contractor, J. W. Coburn; signed, Aug. 7; filed, Aug. 8; cost $1875.

Colma Creek. Excavations, etc.; owner, Spring Valley Water Works; architect, Chief Engineer of Co.; contractor, A. E. Buckman; signed, Aug. 9; filed, Aug. 9; cost 9 cts. per cubic yard.

Diamond near 17th. To build; owner, Andrew Norin; architects, Hermann & Swain; contractor, R. Trost; signed, July 17; filed, July 17; cost $1750.

Dolores near 25th. To build; owner, J. M. Robinson; contractor, Chas. Koenig; signed, July 17; filed, Aug. 2; cost $3150.

Fell near Pierce. Alterations; owner, C. Westphal; architect, A. C. Lutgens; contractor, A. G. Johnson; signed, July 24; filed, July 26; cost $3158.

Fell near Gough. To build; owner, Peter Kelly; architect, W. H. Armitage; contractors, Wheeler & Perry; signed, Aug. 2; filed, Aug. 5; cost $3925.

Fourth and Freelon. To build; owner and architect, O. W. Kenitzer; contractor, Adam Miller; cost $4000.

Fourth near Brannan. To build; owner, H. Goecken; architect, H. D. Mitchell; contractor, Geo. Lack; signed, July 20; filed, July 23; cost $4350.

Fourth street, No. 610. To build; owner, A. Robins; contractor, L. Westerlund; signed, July 31; filed, July 31; cost $2630.

Fourth near Bluxome. To build; owner, A. Roberts; contractor, Westerlund; cost $2000.

Fourth near Welsh. To build; owner, M. Daliner; contractor, R. Rechenback; cost $800.

Fourth Ave. near Point Lobos. To build; owners, T. Morrow and wife; contractor, P. Fredriksen; signed, Aug. 6; filed, Aug. 9; cost $1250.

Geary near Hyde. Alteration except plumbing and painting; owners, Annie and Katie M. Butler; architect, J. T. Kidd; contractors, Cannan & Mooney; signed, Aug. 5; filed, Aug. 6; cost $3112.

Hampshire near 10th. Stable; owner, City of S. F.; architect, C. R. Wilson; contractors, Doyle & Sons; cost $12,873.

Howard near 9th. To build; owner, E. Campini; architect, R. A. Herold; contractor, E. Picapo; signed, July 30; filed, Aug. 1; cost $5275.

Jackson and Webster. To build; owner, T. J. Tickenor; architects, Mahoney & Ryland; contractor, J. J. Dunn; signed, Aug. 7; filed, Aug. 8; cost $1250.

Jones and Sutter. Five story brick; owner, Dr. M. Herzstein; architect, M. J. Lyon; contractor, Wm. Knowles; signed, July 27; filed, July 31; cost $26,500.

Locust near Sacramento. To build; owner, D. T. McArthur; contractor, C. Zwierlein; signed, July 23; filed, July 24; cost $3400.

Market near Spear. Brick building; owners, Macdonough Estate; architect, H. A. Schulze; contractors, Mahoney Bros.; cost $15,000.

Market near Fifth. Electric light wiring; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, E. H. Frost; signed, July 24; filed, Aug. 5; cost $32,926.

Market near Fifth. Folding gates, etc; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, Coppetiers & Mockel; signed, Aug. 5; filed, Aug. 6; cost $9.45 per running foot, about $12,000.

Market near Fifth. Elevators, etc.; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, Coppetiers & Mockel; signed, Aug. 1; filed, Aug. 5; cost $5400.

Market near Stockton. Alterations and additions; owner, I. Magnin; architect, A. J. Barnett; contractors, Ackerson & Paterson; signed, Aug. 6; filed, Aug. 6; cost $1500.

Market near Powell. Brick building; owner, Claus Spreckles; architects, Reid Bros.; contractor, C. Ferris; signed, July 10; filed, Aug. 2; cost $8000.

Market near Powell. Carpenter work on brick; owner, Claus Spreckles; architects, Reid Bros.; contractor, J. W. Hansbrough; signed, July 15; filed, Aug. 2; cost $5300.

Market near Powell. Pressed brick and terra cotta work; owner, Claus Spreckles; architects, Reid Bros.; contractors, Gladding, McBean & Co.; signed, July 12; filed, Aug. 2; cost $3270.

Market near Powell. Plumbing, etc.; owner, Claus Spreckels; architects, Reid Bros.; contractor, W. F. Wilson; signed, July 10; filed, Aug. 2; cost $1005.

Market near Powell. Plastering; owner, Claus Spreckels; architects, Reid Bros.; contractor, Thos. Mannix; signed, July 23; filed, Aug. 2; cost $1085.

Market near Powell. Roof and iron work; owner, Claus Spreckels; architects, Reid Bros.; contractor, Philip Hammond; signed, July 10; filed, Aug. 2; cost $995.75.

McAllister near Hyde. Carpenter work and plastering; owners, California Bible Society; architect, McDougall & Son; contractor, J. H. McKay; signed, July 20; filed, July 20; cost $20,190.

McAllister near Hyde. Brick, stone and terra cotta work; owners, California Bible Society; architects, McDougall & Son; contractor, M. McGowan; signed, July 20; filed, July 20; cost $9989.

McAllister near Hyde. Concrete foundations; owners, California Bible Society; architects, McDougall & Son; contractors, Gray Bros.; signed, July 20; filed, July 20; cost $5329.

McAllister near Hyde. Plumbing and gas fitting, etc.; owner, California Bible Society; architects, McDougall & Son; contractor, H. Williamson; signed, July 20; filed, July 20; cost $2612.

McAllister near Hyde. Painting, graining, etc.; owner, California Bible Society; architects, McDougall & Son; contractor, W. T. Beck; signed, July 20; filed, July 20; cost $820.

Montgomery near Green. To build; owner, G. Capurro; architect, E. Depierre; contractor, A. Norton; signed, July 16; filed, July 18; cost $6415.

Moss near Howard. To build; owner, J. Saunders; architect, D. C. Coleman; contractor, J. Kenealy; signed, July 12; filed, July 18; cost $2175.

Natoma near 5th. Brick building; owner, Louis Dipery; contractors, J. B. Gonycan & J. Miron; cost $1200.

New City Hall. Steel work for tower; owner, City of San Francisco; architect, Frank T. Shea; contractors, Fennell & Son, cost $7396. Corrugated iron, work, contractor, J. H. McKay, cost $2340. Terra cotta, etc.; contractors, Gladding, McBean Co.; cost $2625. Shelving in Law Library; contractor, W. G. Hughes; $994.

Oak near Scott. To build; owner, D. F. Shea; architect, J. J. Clark; contractor, Holm & Shelbley; signed, July 24; filed, July 29; cost $4807.

O'Farrell near Octavia. Carpenter work; owner, Geo. Haas; architect, J. H. Littlefield; contractor, Robert Smilie; signed, July 11; filed, July 17; cost $5640.

O'Farrell near Octavia. Plumbing; owner, Geo. Haas; architect, J. H. Littlefield; contractor, H. Williamson; signed, July 11; filed, July 17; cost $1085.

O'Farrell near Stockton. Alterations and additions; owner, Hyman Bros. Co.; architects, Percy & Hamilton; contractors, Ingerson & Son; signed, July 31; filed, July 31; cost $1595.

Pacific near Jones. Engine house; owner, City of San Francisco; architect, C. R. Wilson; contractor, W. H. Wickersham; cost $14,948.

Perry near Third. To build; owner, J. J. Cass; contractor, A. Klahr; signed, Aug. 3; filed, Aug. 5; cost $2320.

Pennsylvania Ave. near Colusa. Cottage; owners, Chas. H. & Gesine Kaster; architect, D. C. Coleman; contractor, John T. Coleman; signed, Aug. 4; filed, Aug. 6; cost $1400.

Pierce near Union. To build; owner, G. E. Thompson; architects, Martins & Coffey; contractor, James Mooney; cost $2495.

Pine and Steiner. To build; owner, Mrs. E. M. Stewart; architect, C. J. Colley; contractors, Dunford & Kronnick; signed, Aug. 2, filed, Aug. 3; cost $5325.

Power House. Engines and boilers, etc.; owner, Sutro R. R. Co.; architect, J. C. H. Stut; contractors, Fulton Engineering Works; signed, July 30; filed, Aug. 1; cost $36,398.

Post and Powell. Alterations and additions; owner, G. F. Davis; contractors, Robinson & Gillespie; cost $3000.

Polk street No. 1217. Additions; owner, S. B. Denkelspiel; contractors, Robinson & Gillespie; cost $1200.

Sacramento near Gough. To build; owner, M. G. Weed; architect, Reid Bros.; contractors, W. S. Veitch & Bro.; signed, July 18; filed, Aug. 2; cost $5396.

Sacramento and Laguna. Carpentering, plastering, etc.; owner, H. L. Hill; architect, W. J. Mathews; contractor, J. A. Smilie; signed, July 23; filed, July 27; cost $10,775.

Sacramento and Laguna. Concrete and cement; owner, Horace L. Hill; architect, W. J. Mathews; contractors, Keatinge, Leonard & Ransome; signed, July 22; filed, July 26; cost $1000.

Sanchez and 22d. To build; owner, L. Bergerat; architect, G. A. Berger; contractors, Klein & Eickholt; signed, July 31; filed, Aug. 2; cost $2100.

Second Ave. near Clement. Cottage; owner, Geo. F. Lyon; contractor, W. W. Rednall; signed, Aug. 8; filed, Aug. 9; cost $2100.

Steiner and Grove. Carpenter work; owner, E. Probert; architects, Pissis & Moore; contractors, Gardner & Boyden; signed, July 3; filed, July 17; cost $5621.

Steiner and Grove. Plumbing; owner, E. Probert; architects, Pissis & Moore; contractor, Ickelheimer & Bro.; signed, July 3; filed, July17; cost $1137.

Steiner near Oak. To build except plumbing; owner, Mary A. Fuller; architect, Shea & Shea; contractor, R. Trost; signed, July 13; filed, Aug. 6; cost $3723.

Seventeenth near R. R. Ave. To build; owner, Henrietta Warsdale; contractor, Marcuse & Remmel; signed, July 18; filed, July 20; cost $1475.

Sixteenth near Valencia. To build; owner, Mary Harmann; architect, H. Hess; contractors, Weirochl & Franz; signed, July 31; filed, July 31; cost $9,300.

Stockton and Francisco. Engine House; owner, City of S. F.; architect, C. R. Wilson; contractor, W. H. Wickersham; cost $14,948.

Sutter and Grant Ave. Additional story; owner, Macdonough Estate; architect, A. Page Brown; contractors, Mahoney Bros.; cost $10,000.

Third Ave. near Lake. Cottage; owner, G. S. Conroy; contractor, B. J. Taylor; signed, July 19; filed, July 22; cost $1650.

Twenty-second near York. Cottage; owner, Rose Lafer, contractor, J. Kenealy; signed, Aug. 7; filed, Aug. 9; cost $1050.

Twenty-third near Noe. Cottage; owner, Peter McDevit; contractor, W. W. Rednall; signed, July 16; filed, July 16; cost $1100.

Twenty-third near Noe. To build; owner, Mary McDevit; contractor, W. W. Rednall; signed, July 16; filed, July 16; cost $2700.

Turk street No. 314 and 324. Alterations and repairs; owner, Emilie Haller; architects, Wright & Sanders; contractor, J. S. Mackey; signed, July 15; filed, July 17; cost $3610.

Turk near Buchanan. To build house and stable; owner, Wm. F. Wilson; contractor, F. C. Bell; signed, Aug. 6; filed, Aug. 6; cost $6000.

Union near Fillmore. To build; owner, Mrs. J. Ryerson; architect, F. P. Rabin; contractor, J. A. McDonald; signed, Aug. 2; filed, Aug. 5; cost $2638.

Washington near Octavia. Additions and alterations; owner, R. B. Furman; architect, W. J. Mathews; contractor, J. A. Smilie; signed, July 26; filed, July 27; cost $1997.

Welsh near 4th. Additions; owner, Mrs. Deagan; contractor, T. F. Mitchell; cost $800.

Welsh near Fourth. Repairs; owner, Estate of R. White; architect, R. H. White; contractor, D. H. Matheson; signed, July 17; filed, July 17; cost $1900.

Willow Ave. near Buchanan. To build; owner, Annette Reinochel; architect, H. D. Mitchell; contractor, Geo. Lack; signed, Aug. 8; filed, Aug. 9; cost $2950.

York near 21st. Cottage; owner, Bridget McDermott; contractors, Blanchard & Clark; signed, July 26; filed, July 27; cost $1575.

York near 21st. To build; owner, T. E. Brown; contractor, T. C. Cochrane; cost $3500.

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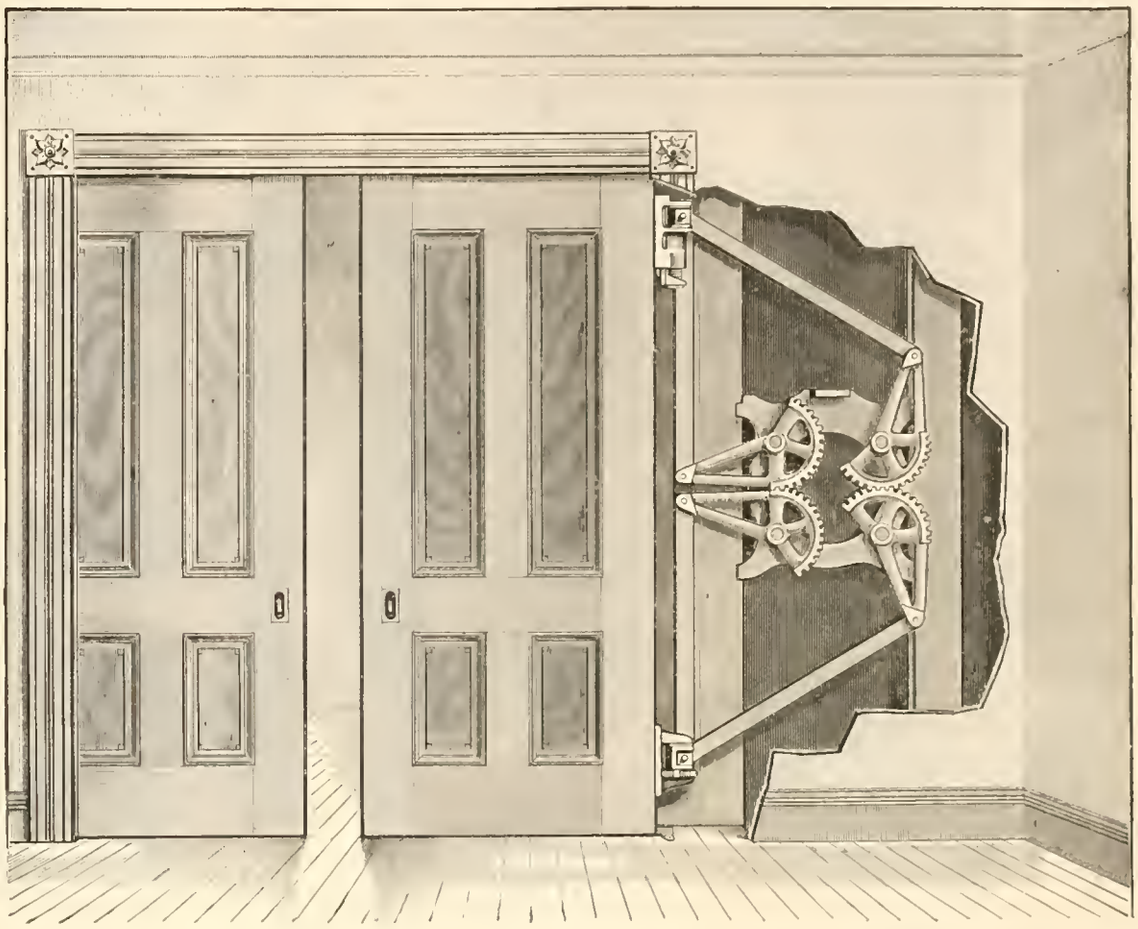

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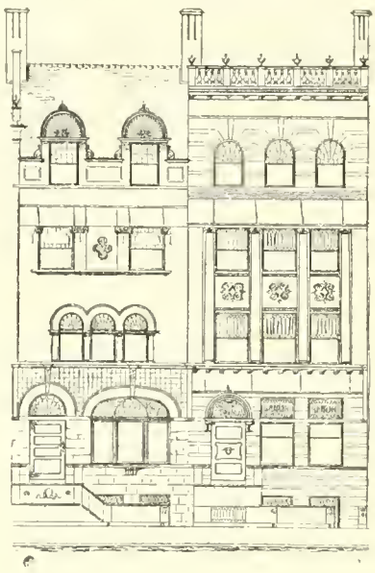

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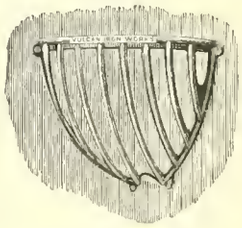

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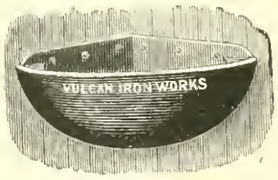

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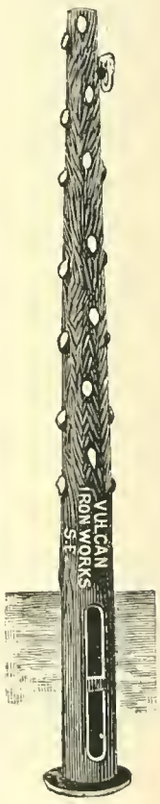

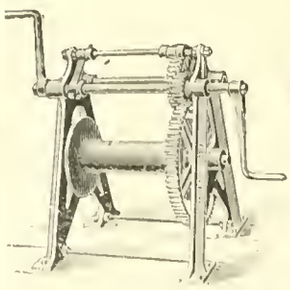

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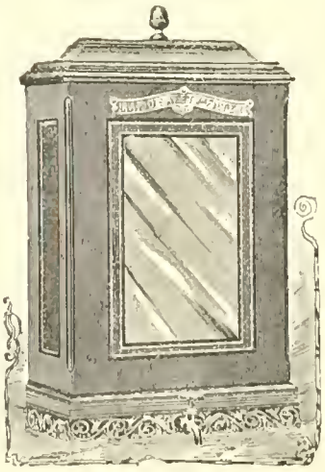

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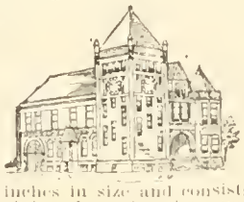

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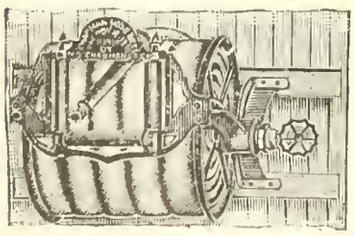

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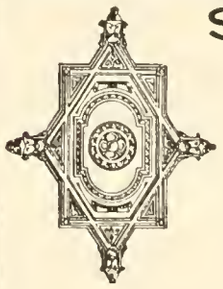

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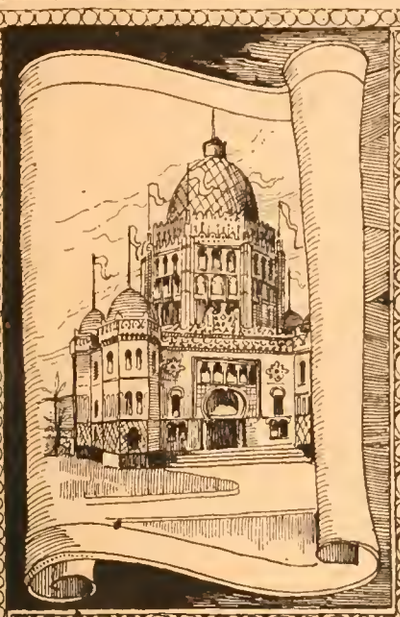

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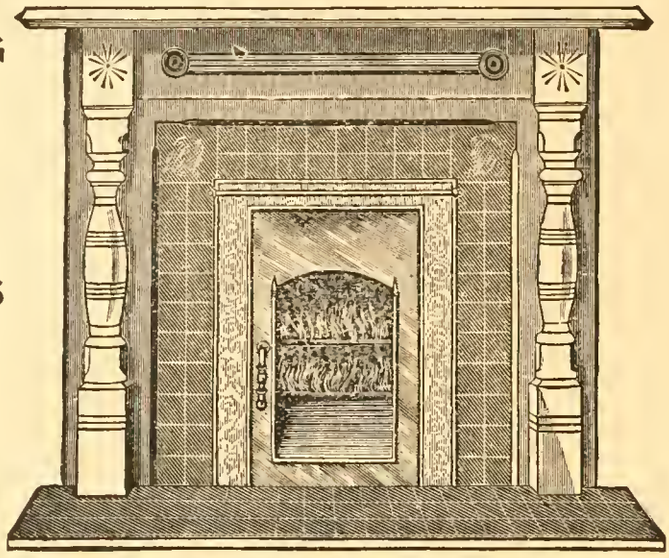

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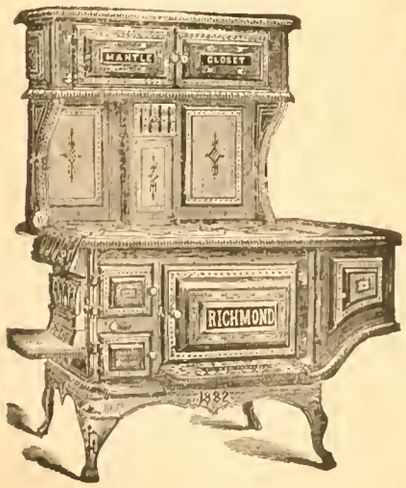

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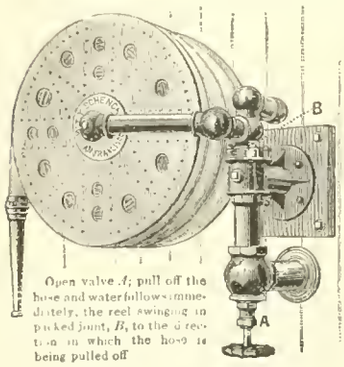

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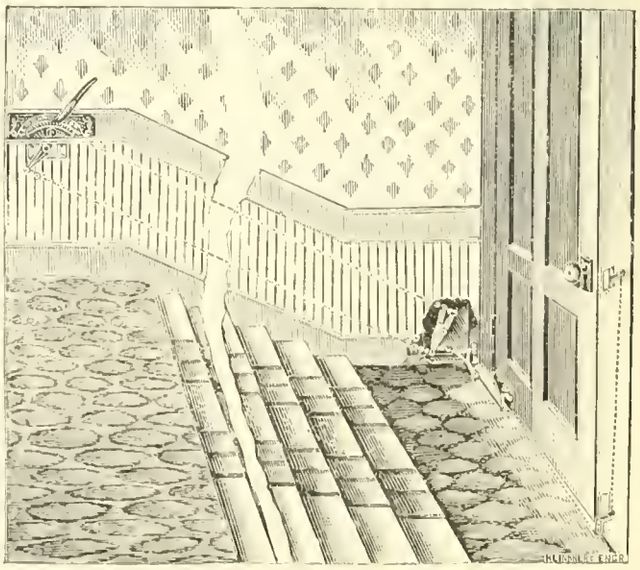

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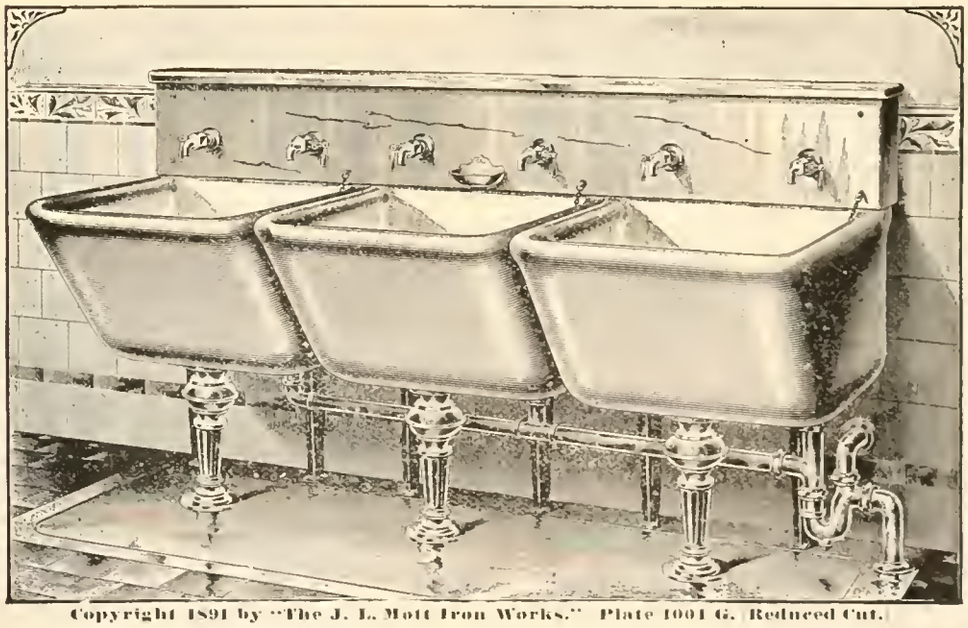

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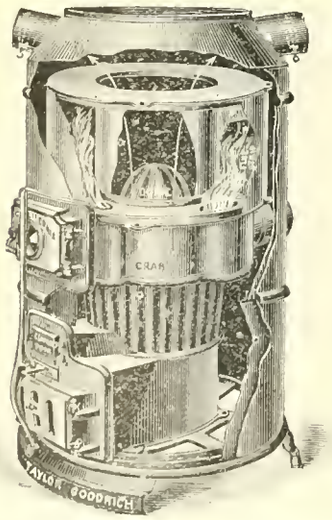

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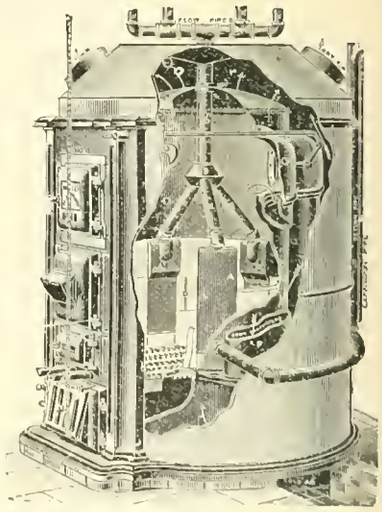

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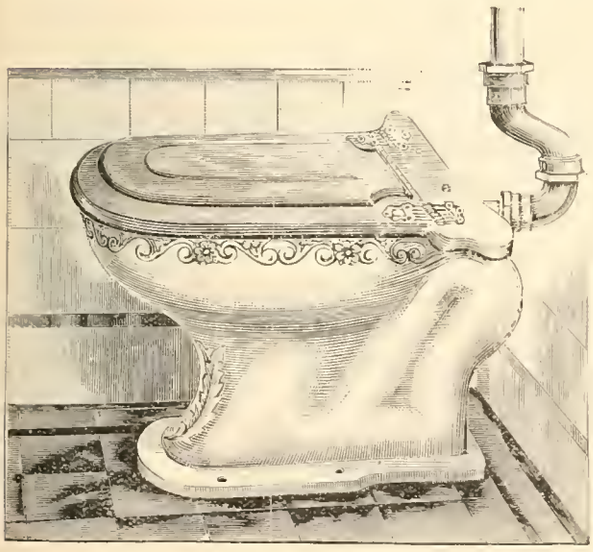

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NOTICE TO ARCHITECTS.

Officers of the COMMISSIONERS OF FAIRMOUNT PARK, CITY HALL, Rooms 127-129. PHILADELPHIA, April 10, 1895.

PLANS AND SPECIFICATIONS will be received by the Commissioners of Fairmount Park until 12 M., October 1, 1895, for an ART BUILDING to be erected in Fairmount Park.

The Commissioners of Fairmount Park will award the following prizes for the various successful plans, namely:—

1st Prize—Six Thousand Dollars [$6,000] for the plans and specifications of the building that shall be adopted.

2d Prize.—Three Thousand Dollars [$3,000].

3d Prize.—Two Thousand Dollars [$2,000].

4th Prize.—One Thousand Dollars [$1,000].

Plans and specifications must be complete in all respects, and must comply with the general requirements and specifications that may be obtained by application to the undersigned.

Plans and specifications for which prizes are awarded will become the absolute property of the Commissioners of Fairmount Park.

RUSSELL THAYER,
Chief Engineer and Superintendent,
Fairmount Park.

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A MONTHLY JOURNAL DEVOTED TO THE ARCHITECTURAL INTERESTS OF THE PACIFIC COAST.

Published on or about the 20th of each month by The California Architectural Publishing Company. The Stockholders being Architects and others interested in the profession.

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THE chaotic condition of the ordinances regulating the construction of buildings in the City of San Francisco is a disgrace to any community with any pretense to civilization.

The original ordinances were framed in 1888 and have since been amended, added to and modified so many times that it would take the traditional Philadelphia lawyer to make head or tail out of the resulting tangle.

Several times in the last few years attempts have been made by the Chapter of Architects, the Chief of the Fire Department, and the Board of Supervisors to frame a complete and comprehensive order to take the place of the present disjointed and fragmentary series of orders that are a serious annoyance and source of confusion to architects, owners and contractors alike, but each attempt has only resulted in failure and the situation has been continually changing for the worse. New methods of construction are being continually introduced, and improved methods and materials are taking the place of the antiquated ideas of former generations; to meet these modern requirements should be the aim of our legislators, yet in place of keeping abreast of the times, and stimulating the progress of invention, that progress is retarded and confined by the swaddling clothes of infancy which should have been discarded years go.

Chief Sullivan of the Fire Department is now attempting to pursuade the Board of Supervisors to give their consideration to this matter, and a petition is being circulated by the architects designed to aid him in his attempt to impress on our City Fathers the importance and necessity of some action being taken with as little delay as possible. Many months time has been devoted to the preparation of a satisfactory ordinance by professional men competent to pass on the many questions involved, and at last an ordinance has been drafted that it is believed will satisfy the different requirements of all the interests concerned. Doubtless there are clauses that are open to objection, but taken as a whole there is no question but it will prove a great improvement on the existing laws, and will give the Architects and Builders the positive knowledge of what is not permissible, which it is so difficult to obtain at present, and thus remove many causes of contention that frequently disturb the harmonious relations that should exist between the property owner, the Fire Department, the Insurance Companies and and the Architect.

PROPOSED NEW CITY HALL FOR OAKLAND.

THE following extracts from the Architect's Report to the Oakland Officials gives a description of the building, and the method proposed to be used in raising money to build same.

The key note to the plan lies in the fact that Washington street, which is now blocked by the present City Hall, is desired to be continued through the City Hall lot and so on to San Pablo Ave. The design allows this and at the same time preserves the *coup d'œil* which all public buildings should have, *i. e.*, a position at the end of a street. The street is continued full width through the building—which is carried over it by arches of colossal proportions, this curtain between the two wings being surmounted by a Tower.

The ground floor is occupied by stores. The arch over the roadway is carried through two stories so that there will be no communication between the wings on the second story. One of these wings on this floor being devoted to a Public Library and the other to the Council Chamber, no communication is necessary.

By this arrangement the Library is entirely separate from rest of building—which is necessary—and the Council Chamber, and the crowds attending on its sessions, are secluded from what might be called the Administrative Offices—which is desirable.

The whole of the third floor is devoted to the offices—while the fourth floor is at present to be left vacant until such time as its space is required by the offices of electric and gas lighting, water works, street railways and other public utilities which will some time be under the control of the Municipality.

Meanwhile the space is proposed to be used for a Public Gymnasium—for public conveniences—and promenade on top of the curtain building.

Two fast elevators would be used one for each wing, and the main entrances would be under the archway in Washington street.

As to the method of raising money to build this Municipal Palace it is proposed to do so by the following means:—

The cost of erecting a fire-proof building would be about $500,000—for which bonds would have to be issued payable in twenty years. They are to be issued in small denominations as low as five dollars. These would be taken up by the people at three per cent interest as has already been proved at Philadelphia.

The building would take say four years to build, so that $125,000 of bonds would be issued every year—at end of the first year would be due one-twentieth of $125,000 or $6,250 and interest $3,750.

Second year there being another issue of $125,000 there would be due $12,500 and interest and so on to the end of the third year when the stores would be ready for occupancy.

There are sixteen stores, each would let for $100 per month, altogether $1,600 a month, $19,200 per year, say $19,000; so that at end of fourth year or at completion of building the amount would stand thus:—

Payable on $437,500 bonds outstanding, one-twentieth .	$21,875
Interest on same at three per cent	13,125
	$35,000
Deduct rent of stores	19,000
Balance to be paid at end of fourth year . . .	$16,000

Thus it is seen that the interest is all paid by rent and we have $2875 to carry to general municipal expenses or to pay off principal by loaning out the Sinking Fund at three per cent to the people instead of paying into General Fund; before the end of sixteen years the whole $500 000 will be paid off and the City will be having an income of $19,000 per year or whatever more the stores will rent for at that time. We will not burden our readers with figures to prove this, but it is so.

This is supposing these bonds are presented every year for redemption. I believe however that the mechanics, architects and superintendents would be glad to receive one-half of their pay in these bonds—especially if the shopkeepers would receive the same in payment for goods and if they refused the city could make arrangements by which the men could get provisions, etc., for these bonds.

They would be found so convenient however as money that very few would be presented for cashing at the City Treasury and as the interest would die out as the bonds matured, this would inure to the benefit of the City so much and the burden upon the city at any time would be but little.

REPORT OF THE CONSULTING ARCHITECT ON THE PLANS OF A. PAGE BROWN FOR THE NEW UNION DEPOT AND FERRY HOUSE.

SAN FRANCISCO, Sept. 10, 1895.

To the Honorable Board of State Harbor Commissioners.

GENTLEMEN:—In compliance with instructions received from your President, on August 28th, we have examined the plans and specifications prepared by A. Page Brown for the proposed Union Depot and Ferry House, with a view to suggesting any modifications that might be better adapted to the use of California materials, and an economical application of the same.

To receive a complete set of drawings and specifications from Mr. Brown, who has also extended every courtesy and facility for examining into the details of the work.

We would say in general we find the plans of the building very complete, and we think well adapted to the objects for which it is designed.

The most important point in which we would differ from the opinion of the designer, is the unit of floor loads to be assumed as a factor for estimating the strength of floor beams, girders and supporting columns.

The plans for metal work as prepared, are estimated to carry with safety, something in excess of 225 pounds per square foot of floors throughout, including Mezzanine floors and the fourteen floors in tower. As the constant weight of beams, tile arches and cement or mosaic floors will be about ninety pounds per square foot it leaves about 135 lbs., per foot for the estimated superimposed load.

The greatest load that can possibly be put on these floors at any place, when used for its legitimate purpose, is a crowd of people, and as people cannot be crowded so as to weigh over eighty pounds to a square foot of floor surface, we think that is all that should be calculated for, or after adding, say, ninety-five pounds for weight of floor, using 175 pounds as the unit of safe floor load.

As this safe load is supposed to have a factor of safety of four for the breaking strength, it follows that it would require a superimposed load of about 600 pounds per foot to break down such floors, or one-half of that amount to strain the material to their elastic limit, and as its greatest load

can be only eighty pounds, it would seem that the margin was abundant.

We would, therefore, suggest that the thickness of metal in beams, girders and columns, be reduced to meet such requirements.

In regard to the beams being furnished by local rolling mills we would observe the spans throughout are about twenty-eight feet, and for any assumed floor load, twenty inch beams are more economical than those of less depth. Our local mills are not prepared to roll beams over fifteen inch in depth. These, if used in the work, would require approximately twenty per cent more metal than would twenty inch beams.

If fifteen inch beams are allowed to be estimated on, the field of competition would be widened, and possibly the price per pound might be less than for twenty inch beams. The cost of the work will doubtless be greater with fifteen inch beams than with twenty inch beams.

We would recommend reducing the weight of tower walls and floors as suggested by Engineer Holmes.

The building as now designed, has skeleton steel construction throughout, except at the front facade.

We believe it would be advisable to put in Z bar columns in the front, and thereby make the entire frame independent of the walls.

The plans are prepared for cast iron columns in the first story, while the specifications give the contractors the privilege of substituting Phœnix steel columns.

As these are to be exposed to the atmosphere and all sorts of wear and conditions, we think cast iron is best for the purpose and they can be produced here without difficulty.

We should remove that choice from the specifications, and require cast iron columns as designed.

The tower Z bar columns, we would require in two story lengths, breaking joints at alternate stories, and put together with fish plates, with the bracing and other parts as on the strain diagram prepared by Mr. Holmes.

As to the general design and details of walls, the plans are worked up for pressed bricks and terra cotta, with a granite base. These materials we consider the most appropriate and economical for clothing and protecting steel construction from the effects of the elements, including fire.

Alternative plans are prepared for stone and bids will be invited for various kinds of that material. If stone were used, the building would appear more monumental and impressive.

We would recommend the cellular constructions in either case, and the proposals submitted will doubtless form the basis of your decision as to the materials to be used.

We shall hope to see glazed bricks used for lining inside walls, corridors, etc., as designed, although alternative bids are to be taken for pressed bricks.

In regard to the scheme of thin marble veneering as proposed by Mr. Pelton, we would say we consider the method in general is practicable and perfectly feasible, if performed with faithful skill and care, and every precaution taken to overcome possible defects.

The vertical joints at angles should be disguised by small reentrant angles, or in quirks of beads, or other manner.

The metal adjustable anchors holding the slabs to the steel frame, should be of some metal or alloy not liable to corrosion, and should extend upward from the joints to the frame, across the air space, so as not to conduct water to the steel frame.

The greatest care should be exercised to fill the joints both vertical and horizontal, with good cement, and after every precaution is taken, we believe some water would find its way through the lofty exposed sides of the tower, and in such places copper gutters should be arranged in the air space above the roof of main building, to catch such leakage, and conduct it out over the main roof.

While we believe buildings may be faced up in this manner to last as long as any portion, we do not feel like recommending it on so large a scale and on such an important building in such an early stage of the methods development Its cost and probability of getting material within reasonable time, will also be factors in your final decision.

In regard to the Portland cement used for brick and concrete work, we think an excess amount is specified. We would suggest for the mortar used in brick work, one part of cement to four parts of lime mortar, made in the usual manner, with North Beach sand; and for the concrete filling and lower portions of floors, one part of cement to nine or ten of properly selected aggregates. And in all cases, we would urge as very important, that the Board of Harbor Commissioners furnish the cement and not the contractors.

Otherwise it will require the constant watchfulness of a superintendent to get one-half of the above amount of cement in the mortar for brick work. With the Board furnishing the cement, the proportions may be changed by the Architect or Superintendent, when it appears desirable, without loss or profit to the contractor.

Finally, we would reduce the thickness of the galvanized iron for all work of that character, from No. 18 to No. 22, as that is as heavy as can be worked by any machine on this coast.

The above are all the suggestions and recommendations we have to make, the advisability of which we will be pleased to discuss with your Honorable Board, Architect and Engineer at any time.

Respectfully submitted,

PERCY & HAMILTON.

FORM OF CONTRACT ADOPTED BY THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

ARTICLES OF AGREEMENT made the day of 189 between of in the County of (hereinafter called "the Employer") of the one part and of and of County of Builder* (hereinafter called "the Contractor") of the other part. Whereas the Employer is desirous of † a messuage and premises at and has caused Drawings and a Specification describing the work to be done to be prepared by of , his Architect: And whereas the said Drawings numbered 1 to inclusive and the Specification marked "A" have been signed by or on behalf of the parties hereto: And Whereas the Contractor has agreed to execute upon and subject to the Conditions set forth in the Schedule hereto (hereinafter referred to as "the said Conditions") the works shown upon the said Drawings and described in the said Specification for the sum of £ :

* Insert "s and co-partners" if such is the fact.
† Insert "erecting" or "restoring" or "adding to" as the case may be.

Now it is Hereby Agreed as Follows:—

1. Inconsideration of the sum of £ to be paid at the times and in the manner set forth in the said Conditions, the Contractor will upon and subject to the said Conditions

spection any work covered up; and should the Contractor refuse or neglect to comply with such request, the Architect may employ other workmen to open up the same. If the said work has been covered up in contravention of the Architect's instructions, or if on being opened up it be found not in accordance with the Drawings and Specification or the instructions of the Architect, the expenses of opening and covering it up again, whether done by the Contractor or such other workman, shall be borne by, and recoverable from, the Contractor, or may be deducted as aforesaid. If the work has not been covered up in contravention of such instructions, and be found in accordance with the said Drawings and Specification or instructions, then the expenses aforesaid shall be borne by the Employer and be added to the Contract sum; provided always that in the case of foundations, or of any other urgent work so opened up and requiring immediate attention, the Architect shall, within a reasonable time after receipt of notice from the Contractor that the work has been so opened, make or cause the inspection thereof to be made, and at the expiration of such time, if such inspection shall not have been made, the Contractor may cover up the same, and shall not be required to open it up again for inspection expect at the expense of the Employer.

ASSIGNMENT OR SUB-LETTING.

19. The Contractor shall not, without the written consent of the Architect, assign this Agreement or sublet any portion of the works.

SUB-CONTRACTORS.

20. No sub-contractor or other person nominated by the Architect shall be employed upon the works against whom the Contractor shall make what the Architect considers reasonable objection, or who will not enter into a contract with the Contractor guaranteeing the due performance of his work, and indemnifying the Contractor against any claims arising out of misuse by the sub-contractor or his workmen of any scaffold erected or plant employed by the Contractor, or that may be made against the Contractor in consequence of any act, ommission, or default of the sub-contractor, his servants or agents.

DAMAGE TO PERSON AND PROPERTY.

21 The Contractor shall be responsible for all structural and decorative damage to property, and for injury caused by the works or workmen to persons, animals, or things, and shall hold the Employer harmless in respect thereof. He shall also be responsible for all injuries caused to the buildings, the subject of this Contract, by frost, or other inclemency of weather, and shall reinstate all damage caused by the same, and thoroughly complete the whole of the works.

INSURANCE—(A) OF A NEW BUILDING.

22. (*a*) The Contractor shall insure the works, and keep them insured until they are delivered up, against loss or damage by fire, in an office to be approved by the Architect, in the joint names of the Employer and Contractor, for the full value of the works executed, and shall deposit with the Architect the policies and receipts for the premiums paid for such insurance; and in default the Employer may insure the works and deduct the premium paid from any moneys due or which may become due. All moneys received under any such policies are to be paid to the Contractor by instalments on the certificates of the Architect, and to be applied in or towards the rebuilding or reparation of the works destroyed or injured. The Contractor shall, as soon as the claim under the policy is settled, proceed with all due diligence with the rebuilding or reparation, and shall not be entitled to any payment in respect thereof other than the said moneys received, but such extension of the time herein mentioned for completion shall be made as shall be just and reasonable. (*b*) The whole building and the works executed under this Contract shall be at the sole risk of the Employer as regards any loss or damage by fire, and in the event of any such loss or damage being so occasioned which affects the original building or structure in addition to the new work, the Contractor shall be entitled to receive from the Employer the full value of all work then executed and materials then delivered, calculated in the manner provided for by Clause 13 hereof, and this Contract, so far as it relates to any subsequent work, may at the option of either party be determined if in the opinion of the Arbitrator such determination shall be just and equitable.

NOTE: Clause [*a*] or [*b*] to be struck out to suit circumstances. [*b*] of a building in course of alteration.

DATE OF COMPLETION.

23. Possession of the site (or premises) shall be given to the Contractor on or before the day of . He shall begin the works immediately after such possession, shall regularly proceed with them, and shall complete the same (except painting and papering or other decorative work which in the opinion of the Architect it may be desirable to delay) by the day of , subject nevertheless to the provisions for extension of time hereinafter contained.

PENALTIES FOR NON-COMPLETION.

24. If the Contractor fail to complete the works by the date named in Clause 23, or within any extended time allowed by the Architect under these presents, and the Architect shall certify in writing that the works could reasonably have been completed by the said date, or within the said extended time, the Contractor shall pay or allow to the Employer the sum of £ sterling per* as liquidated and ascertained damages for every* beyond the said date or extended time, as the case may be, during which the works shall remain unfinished, except as provided by Clause 23, and such damages may be deducted by the Employer from any moneys due to the Contractor.

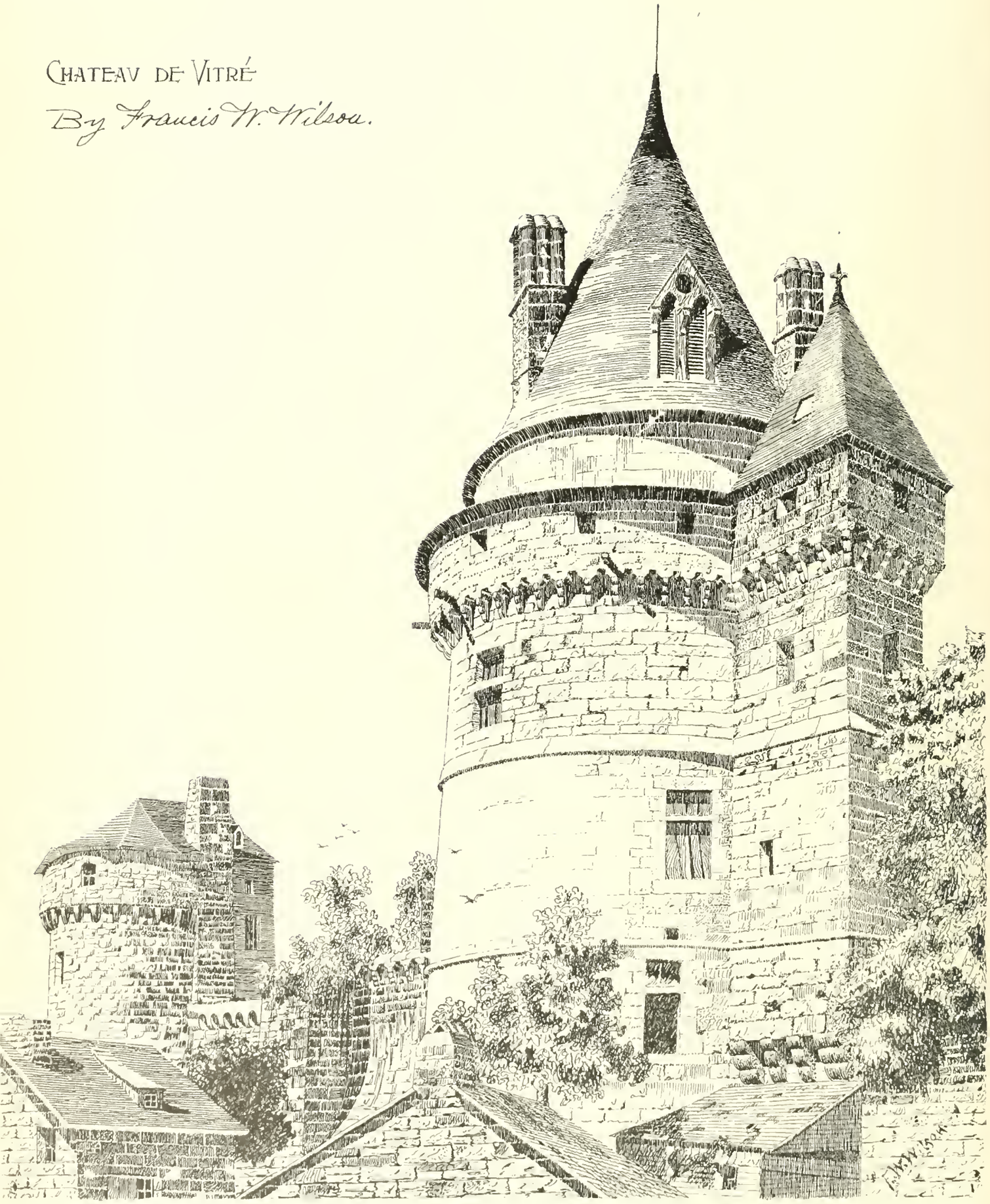
Insert "day" or "week" as may be agreed.

EXTENSION OF TIME.

25. If in the opinion of the Architect the works be delayed by *force majeure* or by reason of any exceptionally inclement weather, or by reason of instructions from the Architect in consequence of proceedings taken or threatened by or disputes with adjoining or neighboring owners, or by the works or delay of other Contractors or tradesmen engaged or nominated by the Employer or the Architect, and not referred to in the Specification, or by reason of authorized extras or additions, or in consequence of any notice reasonably given by the Contractor in pursuance of Clause 12, or by reason of any local combination of workmen or strikes or lock-out affecting any of the Building trades, or in consequence of the Contractor not having received in due time necessary instructions from the Architect for which he shall have specifically applied in writing, the Architect shall make a fair and reasonable extension of time for completion in respect thereof. In case of such strike or lock-out the Contractor shall, as soon as may be, give to the Architect written notice thereof. But the Contractor shall nevertheless use his best endeavors to prevent delay, and shall do all

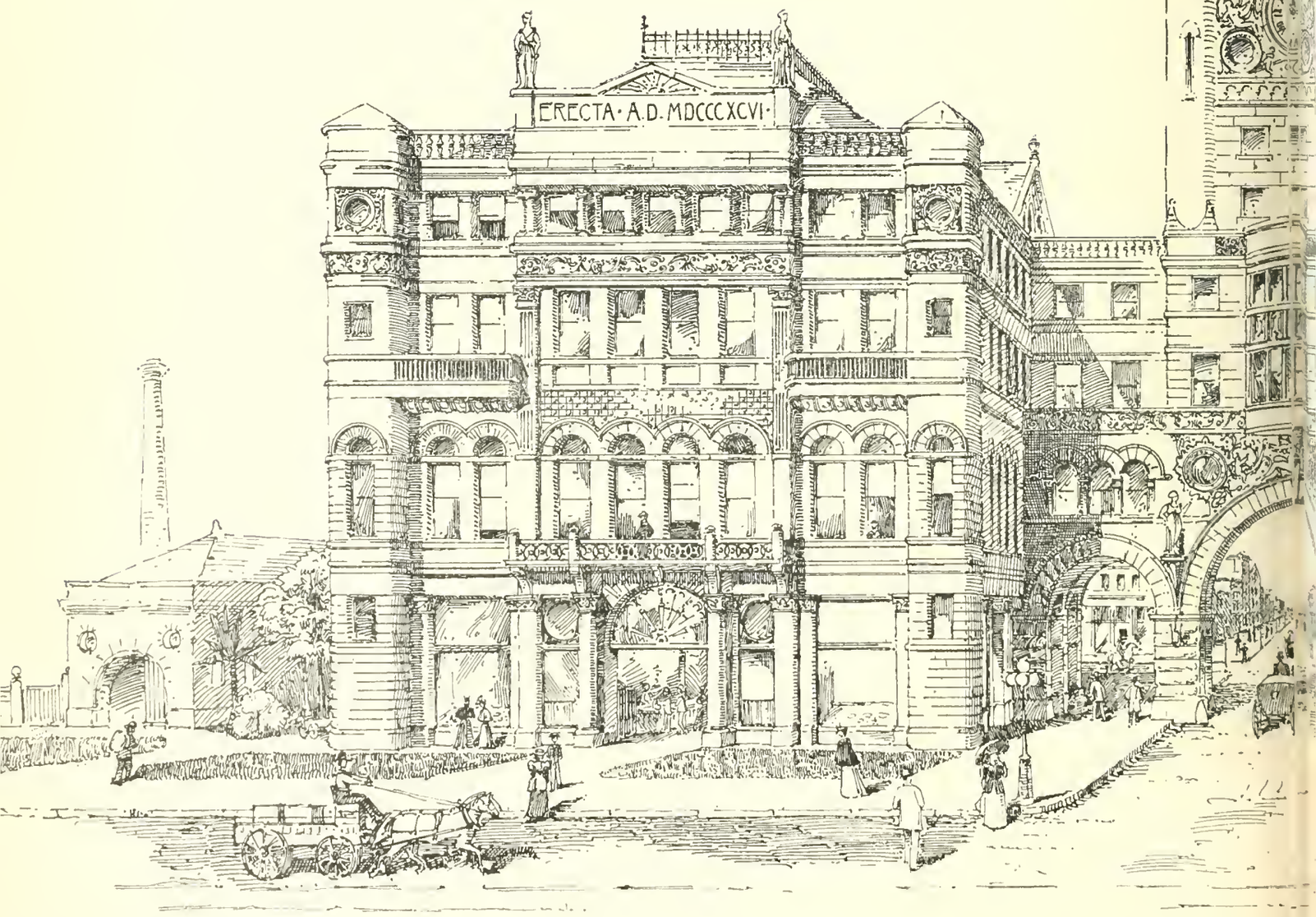
CHATEAU DE VITRÉ

By Francis W. Wilson.



PROPOSED CITY HALL, OAKLAND, CAL.

W. J. CUTHBERTSON, ARCHITECT.



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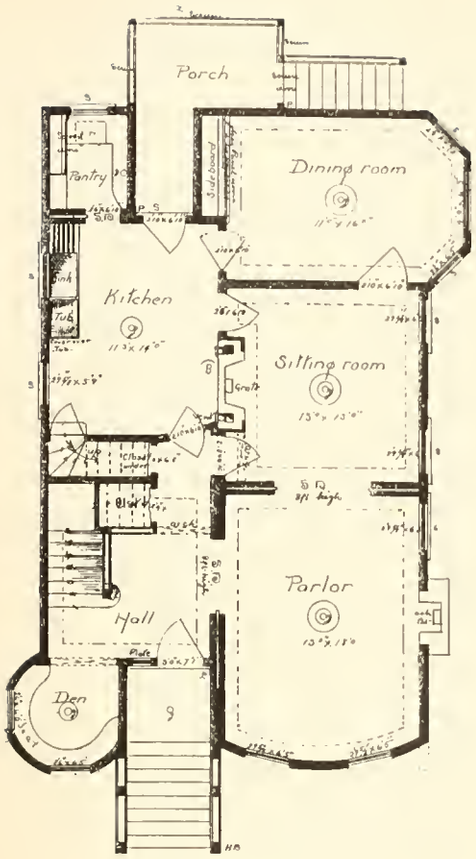
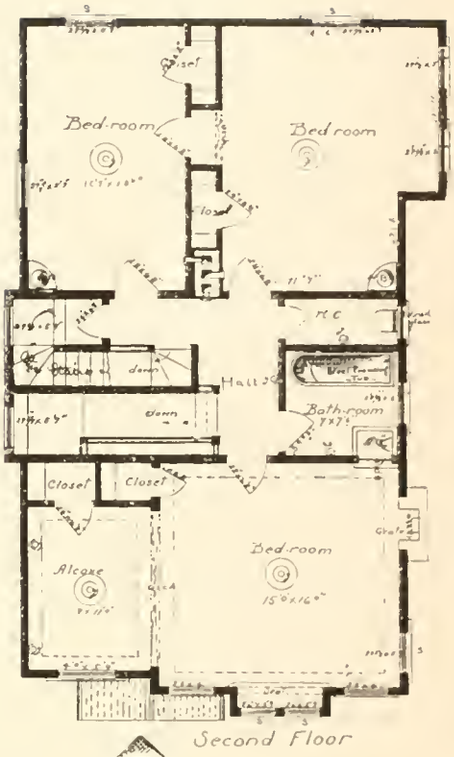
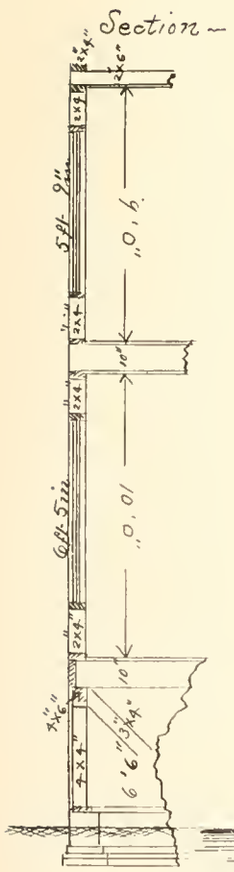
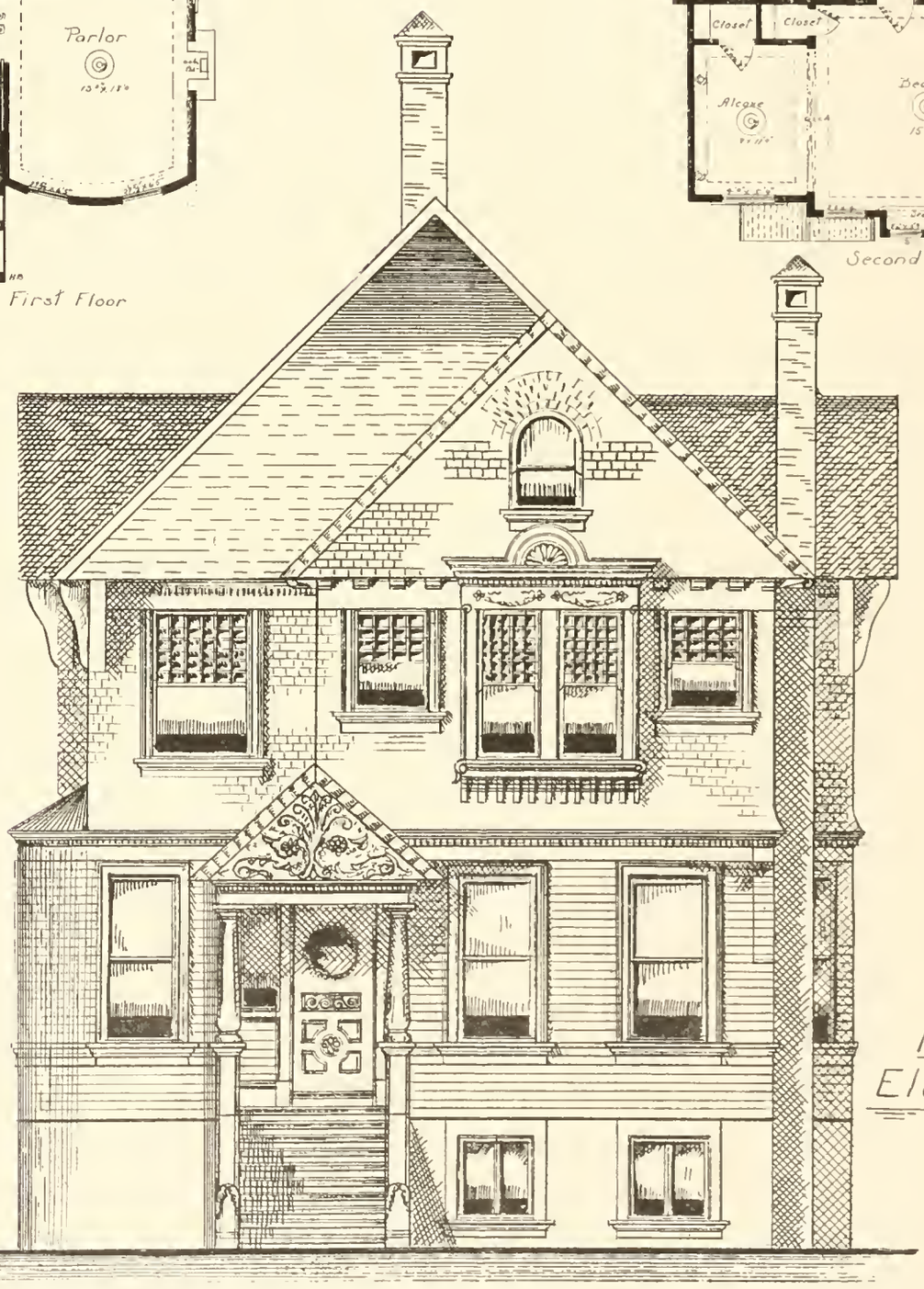


JOHN J & T. D. NEWSOM
ARCHITECTS
RM 4-9 MERCHANTS
EXCHANGE
S.F. CAL







Front Elevation

that may reasonably be required to the satisfaction of the Architect to proceed with the works.

SUSPENSION OF WORKS BY CONTRACTOR.

26. If the Contractor, except on account of any legal restraint upon the Employer preventing the continuance of the works, or on account of any of the causes mentioned in Clause 25, or in case of a certificate being withheld or not paid when due, shall suspend the works, or in the opinion of the Architect shall neglect or fail to proceed with due diligence in the performance of his part of the Contract or if he shall more than once make default in the respects mentioned in Clause 16, the Employer by the Architect shall have power to give notice in writing to the Contractor requiring that the works be proceeded with in a reasonable manner and with reasonable dispatch. Such notice shall not be unreasonably or vexatiously given, and must signify that it purports to be a notice under the provisions of this clause, and must specify the act or default on the part of the Contractor upon which it is based. After such notice shall have been given, the Contractor shall not be at liberty to remove from the site or works, or from any ground contiguous thereto, any plant or materials belonging to him which shall have been placed thereon for the purposes of the works; and the Employer shall have a lien upon all such plant and materials, to subsist from the date of such notice being given until the notice shall have been complied with. Provided always that such lien shall not under any circumstances subsist after the expiration of thirty-one days from the date of such notice being given unless the Employer shall have entered upon and taken possession of the works and site as hereinafter provided. If the Contractor shall fail for days after such notice has been given to proceed with the works as therein prescribed, the Employer may enter upon and take possession of the works and site, and of all such plant and materials thereon (or on any ground contiguous thereto) intended to be used for the works, and all such materials as above mentioned shall thereupon become the property of the Employer absolutely, and the Employer shall retain and hold a lien upon all such plant until the works shall have been completed under the powers hereinafter conferred upon him. If the Employer shall exercise the above power he may engage any other person to complete the works, and exclude the Contractor, his agents and servants, from entry upon or access to the same, except that the Contractor or any one person nominated by him may have access at all reasonable times to inspect, survey, and measure the works. And the Employer shall take such stepts as in the opinion of the Architect may be reasonably necessary for completing the works without undue delay or expense, using for that purpose the plant and materials above mentioned in so far as they are suitable and adapted to such use. Upon the completion of the works the Architect shall certify the amount of the expenses properly incurred consequent on and incidental to the default of the Contractor as aforesaid, and in completing the works by other persons. Should the amount so certified as the expenses properly incurred be less than the amount which would have been due to the Contractor upon the completion of the works by him, the difference shall be paid to the Contractor by the Employer; should the amount of the former exceed the latter, the difference shall be paid by the Contractor to the Employer. The Employer shall not be liable to make any further payment or compensation to the Contractor for or on account of the proper use of the plant for the completion of the works under the provisions hereinbefore contained other than such payment as is included in the contract price. After the works shall have been so completed by persons other than the Contractor under the provisions hereinbefore contained, the Employer shall give notice to the Contractor of such completion and may require him from time to time, before and after such completion, to remove his plant and all such materials as aforesaid as may not have been used in the completion of the works from the site. If such plant and materials are not removed within a reasonable time after notice shall have been given, the Employer may remove and sell the same holding the proceeds, less the cost of the removal and sale, to the credit of the Contractor. Any notice to be given to the Contractor under this clause shall be given by leaving the same at the place of business of the Contractor, or by registered letter sent to him at that address.

"PRIME COST," MEANING OF.

27. The words "Prime Cost" or the initials P. C. applied in the Specification to goods to be obtained and fixed by the Contractor, shall mean, unless otherwise stated in the Specification, the sum paid to the merchant after deducting all trade discount for such goods in the ordinary course of delivery, but not deducting discount for cash, and such sum shall be exclusive of special carriage, the cost of fixing, and Contractor's profit.

PROVISIONAL SUMS.

28. The provisional sums mentioned in the Specification for materials to be supplied or for work to be performed by special artists or tradesmen, or for other works or fittings to the building, shall be paid and expended at such times and in such amounts and to and in favor of such persons as the Architect shall direct, and sums so expended shall be payable by the Contractor without discount or deduction, or (without prejudice to any rights of the contractor existing under the contract referred to in Clause No. 20) by the Employer to the said artists or tradesmen. The value of works which are executed by the contractor in respect of provisional sums, or in additional works, shall be ascertained as provided by Clause 13. At the settlement of the accounts the amount paid by the contractor to the said artists or tradesmen, and the said value of such works executed by the contractor, shall be set against all such provisional sums or any sum provided for additional works, and the balance shall be added to or deducted from the contract sum.

CONTRACTOR TO ERECT SCAFFOLDING FOR SUB-CONTRACTORS.

29. The contractor shall, unless otherwise stated in the Specification, provide and erect all necessary scaffolding and plant for the due execution by the artists and tradesmen referred to in the preceding clause of the work entrusted to them. He shall also permit of the execution of work by any other artists or tradesmen who may be engaged by the Employer.

PAYMENT AND CERTIFICATES.

30. The contractor shall be entitled under the certificates to be issued by the architect to the contractor, and within days of the date of each certificate, to payment by the employer from time to time by installments, when in the opinion of the architect work to the value of £ or less at the reasonable discretion of the architect has been executed in accordance with the contract, at the rate of per cent of the value of work so executed in the building.

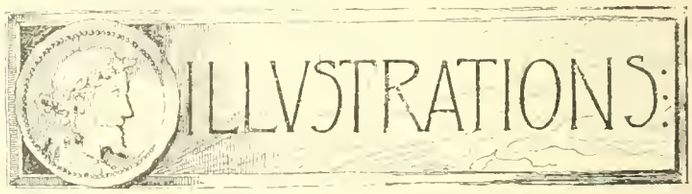
until the balance retained in hand amounts to £ (), after which time the installments shall be up to the full value of the work subsequently executed. The contractor shall be entitled, under the certificate to be issued by the architect, to receive £ (), part of the said sum of £ (), when the works are practically completed, and in like manner to payment of the balance within a further period of months, or as soon after the expiration of such period of months as the works shall have been finally completed, and all defects made good according to the true intent and meaning thereof, whichever shall last happen. The architect shall issue his certificates in accordance with this clause. No certificate of the architect shall be considered conclusive evidence as to the sufficiency of any work or materials to which it relates, nor shall it relieve the contractor from his liability to make good all defects as provided by this agreement. The contractor when applying for a certificate shall, if required, as far as practicable, furnish to the architect an approximate statement of the work executed, based on the original estimate.

NON-PAYMENT BY EMPLOYER.

31. Should the employer not pay the contractor any sum certified by the architect within the times respectively named in Clause 30, the contractor shall give written notice to the employer of the non-payment, and should the employer not pay any such sum within the period of days from the date of delivery of such notice at the employer's address or sent to him there in the ordinary course of post by registered letter, or if the employer shall become bankrupt or file any petition for liquidation of his affairs, and if his Trustee in Bankruptcy shall repudiate this contract, or if the Trustee shall be unable to show within days to the reasonable satisfaction of the contractor his ability to carry out the contract, and to make all payments due or to become due thereunder, or if the works be stopped for months under an order of the architect or any court of law, the contractor shall be at liberty to determine the contract by notice in writing to the architect, and to recover from the employer payment for all work executed and for any loss he may sustain upon any plant or material supplied or purchased or prepared for the purpose of the contract. In arriving at the amount of such payment the rates contained in the contractor's original estimate shall be followed, or, where the same may not apply, rates proportionate to the prices therein contained.

ARBITRATION

32. Provided always that in case any dispute or difference shall arise between the employer or the architect on his behalf and the contractor, either during the progress of the works or after the determination abandonment, or breach of the contract, as to the construction of the contract or as to any matter or thing arising thereunder (except as to the matters left to the sole discretion of the architect under Clauses 4, 9 and 19, and the exercise by him under Clause 18 of the right to have any work opened up), or as to the withholding by the architect of any certificate to which the contractors may claim to be entitled, then either party shall forthwith give to the other notice of such dispute or difference, and such dispute or difference shall be and is hereby referred to the arbitration and final decision of or in the event of his death or unwillingness or inability to act, of or, in the event of his death or unwillingness or inability to act, of a person to be appointed on the request of either party by the President for the time being of The Royal Institute of British Architects, and the award of such Arbitrator shall be final and binding on the parties. Such reference, except on the question of certificate, shall not be opened until after the completion or alleged completion of the works, unless with the written consent of the employer or architect and the contractor. The Arbitrator shall have power to open up, review, and revise any certificate, opinion, decision, requisition, or notice, save in regard to the said matters expressly excepted above, and to determine all matters in dispute which shall be submitted to him, and of which notice shall have been given as aforesaid, in the same manner as if no such certificate, opinion, decision, requisition, or notice had been given. Upon every or any such reference the costs of and incidental to the reference and award respectively shall be in the discretion of the Arbitrator, who may determine the amount thereof, or direct the same to be taxed as between solicitor and client or as between party and party, and shall direct by whom and to whom and in what manner the same shall be borne and paid. This submission shall be deemed to be a submission to arbitration within the meaning of the Arbitration Act 1889.



The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

PROPOSED CITY HALL, Oakland, Cal., W. J. Cuthbertson, Architect.

DESIGN FOR RESIDENCE, John J. & T. D. Newsom, Architects.

CHATEAU DE VITRE by Francis W. Wilson.

REID BROS. should have been credited with the design of the building being erected by Claus Spreckels on Market street for the *Morning Call* published in last month's Journal.

SAN FRANCISCO CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS.

THE Annual Meeting of the San Francisco Chapter of the American Institute of Architects was held on Friday, September 13, 1895.

The election of officers for the ensuing term resulted in the selection of the following:—Seth Babson, President; W. P. Moore, Vice-President; Oliver Everett, Secretary; John M. Curtis, Treasurer. Trustees—Geo. H. Sanders, W. J. Mathews, F. T. Shea, H. A. Schulze, M. J. Lyon.

BOOKS AND PERIODICALS

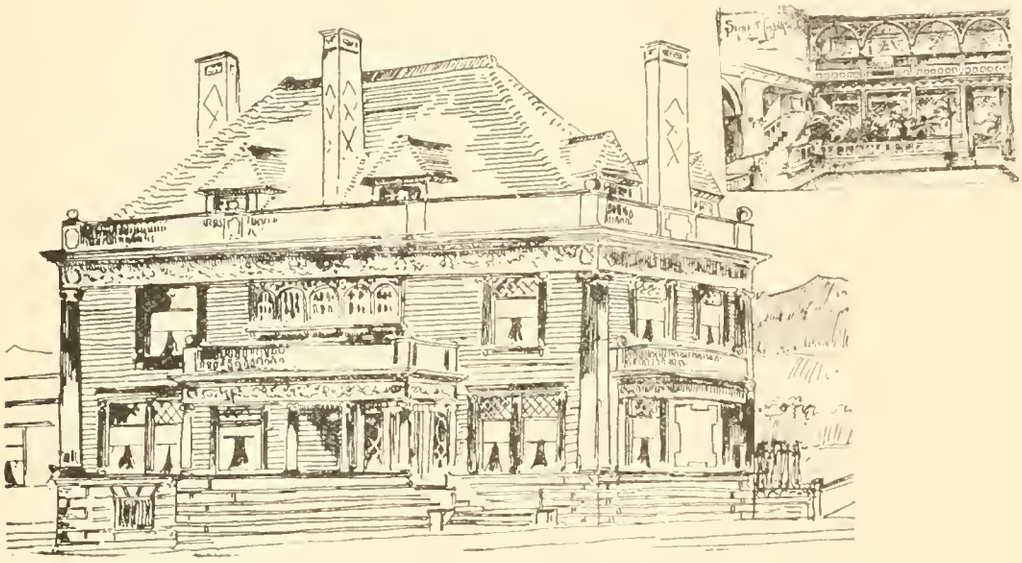
THE ENGINEERING REVIEW, epitome of current engineering literature, published in London for August, 1895, contains as leading article the description of the principal steamship lines, with illustrations. The remarkable advances that have been made in naval architecture and marine engineering during recent years invests this subject with a special interest.

THE FORTNIGHTLY REVIEW for August has a very explicit account of politics in the Transvaal, proving pretty conclusively that the present Boer Reign cannot last much longer with the large influx of Americans, English and Africanders thereinto. Also an article on "Common Sense and Crime," a critique on the Report of the Parliamentary Committee formed for examining into Prison Administration. The whole result seems to be contained in the following sentence—"Honesty is but poorly paid, the wages of weekly toil are but trifling in comparison with the profits of a single *coup* which will enable its perpetrator to lead an easy, idle life for months." From which it appears that the common sense way of diminishing crime is to make the wages of honest labor sufficient for its recipients to lead a well-to-do, easy life and to provide the opportunity for all to obtain the same.

Fitting tributes are made to Prof. Huxley in one of which he is set right with the Altruistic world by showing that the survival of the "fittest" did not necessarily mean the "best," in the following passage quoted from the works:

"As I have already urged, the practice of that which is ethically best—what we call goodness or virtue—involves a course of conduct which, in all respects, is opposed to that which leads to success in the cosmic struggle for existence. In place of ruthless self-assertion it demands self-restraint; in place of thrusting aside, or treading down, all competitors, it requires that the individual shall not merely respect, but shall help his fellows; its influence is directed, not so much to the survival of the fittest, as to the fitting of as many as possible to survive. It repudiates the gladiatorial theory of existence. It demands that each man who enters into the enjoyment of the advantages of a polity shall be mindful of his debt to those who have laboriously constructed it; and shall take heed that no act of his weakens the fabric in which he has been permitted to live. Laws and moral precepts are directed to the end of curbing the cosmic process and reminding the individual of his duty to the community, to the protection and influence of which he owes, if not existence itself, at least the life of something better than a brutal savage."

LIPPINCOTT'S MAGAZINE for September comes to hand with its usual complete novel "A Case in Equity," by Francis Lynde, it is of interest as the reader is lead to expect a case in a law court while after all the equity is a case in the court of love, but as every thing comes out all right in the end, every body is supposed to be happy. "Napoleon and the Regent Diamond" is rather a disappointing detail of dry facts, where the reader may have been expecting a story as sparkling as the name implies. In general the contents are interesting and will repay a careful perusal.



J. CATHER NEWSOM, ARCHITECT.

"WHERE IGNORANCE IS BLISS, T'IS FOLLY TO BE WISE."

HOW many people appear to be happy living under the delusion that the above line from Thomas Gray is a fact. We were led into this reflection by over-hearing a contractor who was building a house upon the opposite side of the avenue in which we live. "Why!" he exclaimed, "your cottage has a foundation fit for a three story house, there is no need of such bracing for a one story cottage, it costs money, and the owner never knows the difference."

Many people appear to think the money paid to an architect for planning and supervising a building, is so much money added to the cost, not reflecting that every dollar paid the architect, may result in saving two dollars to the owner.

It may be true that a poor foundation and scant bracing may pass muster for a time and if the walls are prettily tinted and a lovely picture moulding around the rooms, the owner is satisfied for the time, then if another house is built on each side the three may protect each other from blowing down.

This is no fancy sketch as may be seen in more than one instance in Richmond where a house has been wedged in between two other houses for the purpose of support.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

RELEASE AND DISCHARGE JOINT CONTRACTORS.—Where a person who is liable to two or more on a joint contract settles with one of them for a part of the claim, such settlement does not discharge him from the liability to the others, but they may sue for their part without joining the one settled with.

Lansing v. Bliss, Supreme Court, General Term, First Department, 33 N. Y. Sup. Rep. 310.

EFFECT OF PAYMENT OF AMOUNT OF LIEN INTO COURT.—The character of an action to foreclose a mechanic's lien is not affected by the fact that the amount claimed has been deposited with the clerk of the court, and the claimant is not entitled to the money deposited until he has recovered a judgment of foreclosure against the property.

Schillinger Fire-proof Cement & Asphalt Co. v. Arnott, Supreme Court, General Term, First Department, 33 N. Y. Sup. Rep. 343.

SERVICE OF NOTICE OF MECHANICS' LIEN ON OWNER.—Under the statute, providing that a notice of the lien filed shall within ten days be served on the owner or lessee if he can be found in the county, or in case of his absence from the county, then a copy on his agent within the county, and, if neither can be found within the county, a copy of such notice shall be posted on the building, service of notice by mailing a copy to the general manager of the owner at a place outside the county is insufficient.

Hannah & Lay Mercantile Co. v. Mosser, Supreme Court of Michigan, 62 N. W. Rep. 1120.

DAMAGES FOR DELAY.—Where a contractor fails to complete a building, and the owners take possession and do so, the measure of damages will be the amount of the unpaid contract price, less the fair and reasonable amount the owners had to pay to complete the work.

Mills v. Paul, Court of Civil Appeals of Texas, 30 S. W. Rep. 558.

THE SUPREME COURT OF PENNSYLVANIA HOLDS, THAT THE OWNER OF A BUILDING CANNOT COMPLAIN OF AN INSTRUCTION.—In an action to enforce a mechanics' lien restricting a material man's recovery to the value of the materials furnished by him on the credit of the buildings, and actually used in their construction.

Scranton Lathe Turning Co. v. Cassidy, 31 At. Rep. 734.

VALIDITY OF ORDER CANCELLING LIEN.—Under the statutes, providing that at the commencement of an action to foreclose, the lien may be discharged by the deposit of "such sum of money as in the judgment of the court will be sufficient to pay any judgment which may be recovered against the property," the only question for the court, on an application to cancel the lien, is the amount of the deposit to be made, and the validity of a claim cannot then be inquired into, and therefore an order directing the cancellation of a lien without requiring a deposit to secure it is void, though the claimant was made a defendant to the action, and failed to appear.

Fisher v. Hussey, Supreme Court of New York City, General Term, 32 N. Y. Sup. Rep. 762.

PAYMENT CANNOT BE ENFORCED UNTIL CONTRACT IS COMPLETE.—Under the statute, providing that, before a party can compel another to perform any act under it, he must fulfill all conditions precedent imposed upon himself, one who has agreed with a contractor to furnish "all the couplings to be used in the construction of a pipe line," at a fixed rate per pound, cannot enforce payment before all the material has been delivered, and hence his cause of action against the owner of the structure does not accrue till the last delivery.

First Nat. Bank of Bridgeport v. Perris Irrigation Dist. 40 Pac. Rep. 15.

ENTIRETY OF CONTRACT.—Under a contract providing for the erection of a house, and that the owner, on the erection of the same, should pay the contractors the sum of $2,218 as follows: First shall be deducted therefrom (the final payment) all liquidating damages and deductions by reason of improper labor and material, and the balance payable as follows: $200 when foundation is completed, $600 when roof is on, $700 when plastering is completed and acceptance of house, provided no sum shall be due till all work and material is done and furnished in compliance with plans and specifications to the owner's satisfaction, and mechanics' lien released—is not an entire contract, preventing action upon it before completion of the building according to the contract.

Crawford v. McKinney, Supreme Court of Penn., 30 At. Rep. 1017.

DEFECTIVE CLAIM FOR MECHANICS' LIEN.—A mechanics' lien claim, which states that the material was furnished to one person, and that the land was owned by another, and does not state that the material was furnished at the request of the owner, is fatally defective, though it alleges that the person to whom the material was furnished was in possession of the land under a contract of purchase with the owner.

Cross v. Tscharnig, Supreme Court of Oregon, 39 Pac. Rep. 540.

FATAL VARIANCE IN MECHANICS' LIEN CLAIM.—Where the claim of mechanics' lien, and the complaint in an action to foreclose the lien, alleged a contract to pay the carpenter $3.50 per day, and a contract to pay the reasonable value of his services was proved, and such value was shown to be $2.84 per day, the variance is fatal.

Jones v. Shuey, Supreme Court of California, 40 Pac. Rep. 17.

THE J. L. MOTT IRON WORK'S SHOW ROOM.

THE J. L. MOTT IRON WORKS of New York have opened an exhibition of goods manufactured by them, at Room 27 Flood Building under the management of M. S. James who, for several years has been well and favorably known on the Pacific Coast as their Representative. They have fitted up two large rooms completely filled with the different articles that are needed by Architects, Plumbers and Builders. Along one wall is a row of closets under water showing all the latest improvements in Mechanism, and the practical working of same can be seen.

There are all the usual kinds of Bath and Seat Tubs shown in Porcelain Iron and Imperial Solid Porcelain; Laundry Tubs, Kitchen and Slop Sinks, etc. Some of them are beautifully decorated in gold and some are plain. One of the most attractive objects of the whole display is a Lavatory of Mexican Rose Onyx, with China Basin and Mirror over same and Silver plated Trimmings. Another Lavatory shown is of Italian Statuary Marble with China Basin, Mirror and Nickel plated Trimmings. The great reduction in the prices of the Imperial Solid Porcelain goods recently made by this Firm brings them in reach of almost everyone that would use the Porcelain lined goods, there being only a slight difference in the cost.

There is a display also of Shower and Needle Baths for use principally in private residences and public Baths. These are shown fitted with Porcelain lined Iron Receptors instead of the old style Marble Slab. These Receptors prevent the water from flowing all over the floor of Bath Room and are a great improvement. There is also to be seen a full line of Plumber's specialties, including Bath Room Trimmings, such as Towel Racks and Shelves, Sponge and Comb and Brush Holders, etc., that are manufactured by them and which have obtained for themselves such a high reputation.

The J. L. Mott Iron Works has been induced by Mr. James to open these Show Rooms because of the unsatisfactory methods both to him and his customers of selling from Catalogue. The goods can now be shown the parties who desire to use them and can see exactly what they are going to have. The business of the Mott Iron Works has increased to such an extent, and with the constantly getting out by them of new goods it became almost an absolute necessity that some such Headquarters should be opened.

The J. L. Mott Iron Works, through Mr. James their Coast Manager extends a very cordial invitation to Architects, Plumbers, Contractors and all persons contemplating building, who may be interested in fine plumbing work to visit these rooms in the Flood Building feeling satisfied that they will be well repaid.

CITY BUILDING NEWS.

Alabama near 22d. To build; owner, John C. Callaghan; architect, M. J. Welsh; contractor, Jos. Sullivan; signed, Aug. 8; filed, Aug. 10; cost $2195.

Bartlett near 21st. Alterations; owner, Mrs. A. C. Kratz; contractor, H. R. Schuckert; signed, Aug. 9; filed, Aug. 10; cost $1189.

Bartlett near 22d. Alterations and additions; owner, Mrs. Agatha Curtaz; architect, Emil John; contractors, Weinvehl & Fromz; signed, Aug. 12; filed, Aug. 14; cost $3525.

Bernard near Jones. To build; owner, Abraham Hessel; contractor, F. V. Acker; signed, Aug. 20; filed, Aug. 20; cost $2550.

Brannan near 4th. To build; owner, Rev. D. Nugent; architect, P. J. Donohoe; contractor, Daniel Powers; signed, Aug. 8; filed, Aug. 16; cost $7399.

Brannan near 2d. Alterations and repairs; owner, Vermont Marble Co.; contractor, J. A. McDonald; cost $5000.

Brannan near 4th. To build; owner, John Donovan; architect, E. A. Garin; contractor, J. A. McDonald; signed, Aug. 14; filed, Aug. 22; cost $2825.

Brannan near 4th. To build; owner, D. Lewis; cost $2000.

Broderick near Golden Gate Ave. To build; owner, A. Goodman; architect, C. M. Rousseau; contractor, J. Irwin; cost $5000.

Broadway near Webster. To build; owner, W. H. Dimond, architects, Polk & Polk; contracctors, W. Knowles & Co.; signed, Aug. 6; filed, Aug. 16; cost $14,960.

Broadway and Buchanan. Plumbing, etc.; owner, Annie Donahue; architect, A. Page Brown; contractor, W. H. Wilson; signed, July 9; filed, Aug. 23; cost $1480.

Broadway and Buchanan. Steam heating; owner, Annie Donahue; architect, A. Page Brown; contractor, W. W. Montague & Co.; signed, Aug. 23; filed, Aug. 23; cost $1525.

Broadway and Buchanan. Mill work; owner, Annie Donahue; architect, A. Page Brown; contractors, Burnham-Sandeford Co.; signed, Aug. 7; filed, Aug. 23; cost $4850.

Broadway near Gough. Plumbing, etc.; owner, Mrs. Maggie Hochstadter; architect, M. J. Lyon; contractor, H. Williamson; signed, Aug. 15; filed, Aug. 29; cost $788.

Broadway and Buchanan. Painting, etc.; owner, Annie Donahue; architect, A. Page Brown; contractor, J. H. Keefe; signed, Aug. 31; filed, Sept. 5; cost $1735.

Bluxome near 4th. To build; owner, Elizabeth O'Brien; architect, P. J. Donahue; contractor, C. B. Franklin; signed, Aug. 20; filed, Aug. 21; cost $2400.

Bush near Laguna. Alterations and additions; owner, M. J. Simmons; Alexander; Hildebrand, superintendent; contractors, J. A. and Allan McDonald; signed, Aug. 20; filed, Aug. 21; cost $2845.

Bush near Laguna. Painting, etc.; owner, Congregation Ohabai Shalome; architect, M. J. Lyon; contractor, A. A. Ehat; signed, Aug. 17, filed, Aug. 20; $964.

Buchanan near Sutter. Alterations and additions; owner, Mary Doran; contractor, Herman Hansel; signed, Sept. 2; filed, Sept. 2; cost $1840.

California and Devisadero. To build; owner, Mary G. Dutton; architects, Percy & Hamilton; contractors, Concannon & Shay; signed, Aug. 14; filed, Aug. 15; cost $7500.

California and Devisadero. Excavations; owner, Mary G. Dutton; architects, Percy & Hamilton; contractors, Riley & Laine; signed, Aug. 14; filed, Aug. 15; cost $2175.

California near Scott. To build; owner and builder, J. F. Ortman; architect, M. R. Johns; cost $12,000.

California near Broderick. To build; owner, Wm. F. Roberts; architect, Emil John; contractor, W. H. Wilton; signed, Aug. 21; filed, Aug. 24; cost $3140.

California near Broderick. Alterations and additions; owner, Mrs. Annie A. Kelly; architect, Emil John; contractors, Lorenzen & Fevrie; signed, Sept. 4; filed, Sept. 7; cost $2286.

California near Mason. To build; owner, Elizabeth Jane Tricot; architect, Emile Depierre; contractor, D. Ross; signed, Sept. 4; filed, Sept. 5; cost $8600.

Central Ave. near Pacific Ave. To build; owner, Mr. and Mrs. C. E. Brown; contractor, P. Rive; signed, Aug. 15; filed, Aug. 16; cost $5300.

Clement near 13th Ave. To build; owner, Andrew Lynch; architect, C. F. Robertson; contractor, C. Larsen; signed, Aug. 26; filed, Aug. 27; cost $925.

Clay near Drumm. One-story brick; owner, John Van Bergen; architect, Henry Geilfuss; contractors, Hood & Watson; signed, Aug. 2; filed, Sep. 2; cost $1439.

Commercial near Sansome. Repair on brick; owner, Agent L. C. Babin; contractor, W. B. Kroeger; cost $8000.

Dupont and Bay. Mason work for brick warehouse; owners, Stauffer & Co.; contractor, J. H. Hanavan; cost $1500.

Drumm and Commercial. Two-story brick; owners, Deming & Co.; cost $7000.

Drumm and Merchant. Two-story brick; owner, J. De. La Montanya; architects, Percy & Hamilton; contractor, Silas Carle; signed, Aug. 24; filed, Aug. 27; cost $23,743.

Ellis near Taylor. Additions; owner, by Agent G. O. Davis; raising, etc.; cost $10,000.

Ellis near Laguna. Additions and alterations; owner, Anton Hollar; architect, Martens & Coffey; contractors, Ackerson & Peterson; signed, Aug. 31; filed, Aug. 31; cost $5915.

Eleventh near Bryant. To build; owners, J. T. and O. J. Redmond; architect, J. P. Brady; contractors, Barrett & Quinn; signed, Aug. 26; filed, Aug. 30; cost $2950.

Fair Oaks near 25th. To build except mantels, etc.; owner, Clara L. Arguello; architect, Martens & Coffey; contractors, Ackerson & Paterson; signed, Aug. 22; filed, Aug. 22; cost $3300.

Fourth near Brannan. To build; owner, Isabella H. Lacy; architect, S. Babson; contractor, M. S. Libbey; signed, Aug. 22; filed, Aug. 22; cost $2350.

Fourth Ave. near Lake. To build; owner, W. O'Leary; contractor, Jas. McConahey; signed, Aug. 12; filed, Aug. 12; cost $1532.

Fourth Ave. near Pt. Lobos. To build; owner, Mrs. Marie J. Ganco; contractor, J. V. Hull; signed, Aug. 13; filed, Aug. 13; cost $5400.

Fourth and Brannan. To build; owner, Estate of Wm. Schmidt, per W. G. Horshaw; architect, W. J. Mathews; contractor, P. Maloney; signed, Aug. 23; filed, Aug. 29; cost $4925.

Fourth and Brannan. To build; superintendent, Geo. Lack; days' work; cost $2500.

Fifth near Brannan. To build; owner, J. Hummell; contractor, H. Mitzler; cost $1800.

Folsom Wharf Coal bunkers; owners, Dunsmuir & Sons; contractor, Pacific Bridge Co.; cost $10,387.

Folsom street wharf No. 2. Coal bunkers; owner, R. Dunsmuir & Sons; architect, H. C. Holmes; contractors, Pacific Bridge Co.; signed, Sept. 6; filed, Sept. 11; cost $10,724.

Fillmore and Washington. To build; owner, Emma Joseph; architect, W. H. Lillie; contractors, Moore & Camerary; signed, Aug. 22; filed, Aug. 29; cost $5896.

Freelon near 4th. Three two-story frames; owner, Mrs. J. Stappenbeck; architect, Emil John; contractor, H. T. Greib; signed, Aug. 9; filed, Aug. 14; cost $4525.

Freelon near Fourth. To build; owner, Patrick Minehan; architect, A. J. Barnett; contractors, Sheilds & Hickox; signed, Aug. 20; filed, Aug. 22; cost $1410.

Freelon near 4th. To build; owner, Wm. Gleason; architect, A. J. Barnett; contractors, Sheild & Hickox; signed, Aug. 20; filed, Aug. 22; cost $3200.

Fifteenth near Brannan. Stable; owner, Mrs. Zoe F. Venard; contractor, R. J. Pavert; signed, Aug. 12; filed, Aug. 13; cost $1081.

Fifteenth Ave; near P. To build; owner, Casper J. Becker; architect, D. J. Ellis; contractor, J. P. Rines; signed, Aug. 12; filed, Aug. 13; cost $1290.

Fourteenth near Howard. To build; owner, Leon Levy; architect, E. J. Vogel; contractors, White Bros.; signed, Aug. 19; filed, Aug. 19; cost $1225.

Francisco and Stockton. Concrete and artificial stone work; owner, S. F. Fire Department; architect, C. R. Wilson; contractor, W. H. Wickersham; subcontractor, Keatinge, Leonard & Ransome, signed, Aug. 8; filed, Aug. 22; cost $1150.

Forty-eighth Ave. and V. To build; owner, C. Musocro; architects, Havens & Toepke; contractor, Geo. Walker; signed, Sept. 10; filed, Sept. 11; cost $3525.

Green near Fillmore. To build; owner, Alexander Heins; architects, Kenitzer & Barth; contractor, Chas. Schutt; signed, Aug. 14; filed, Aug. 16; cost $4180.

Green and Octavia. To build; owner, Edward Deleani; architect, E. Depierre; contractors, A. Caccia & Co.; signed, Aug. 22; filed, Aug. 24; cost $6470.

Grove near Buchanan. To build; owner, Jacob Denzler; architects, Kenitzer & Barth; contractor, Adam Miller; signed, Sept. 4; filed, Sept. 5; cost $7100.

Haight and Waller. Clayton and Cole, recreation ground; owners, Paul Boyton Chute Co.; architect, Robert J. Riley; contractors, Pacific Bridge Co.; signed, Sept. 5; filed, Sept. 6; cost $3015.50.

Harrison near Third. owner, Mary J. Morrison; contractors, Johnson & Secor; signed, Sept. 3; filed, Sept. 3; cost $2900.

Howard near Lafayette. To build; owner, Margaret McCormick; architect, J. P. Brady; contractor, John Foster; signed, Aug. 23; filed, Aug. 23; cost $3375.

Hyde near Geary. To build; owner, M. Keefe; architect, M. J. Wesh; contractor-Doyle & Son; signed, Sept. 6; filed, Sept. 11; cost $6784; plumbing, etc., contractor, E. Hogan, $840; electrical work, contractor, Will & Fink, $165; painting, M. J. Donovan, $635.

Jackson near Central Ave. To build; owner, Minnie H. Hollows; architect, Emil John; contractor, F. A. Hellmuth; signed, Aug. 30; filed, Sept. 4; cost $2986.

Jersey near Noe. To build; owner, Wm. Morgan; contractors, Bell & Townsend, signed, Aug. 30; filed, Sept. 7; cost $1600.

Laguna and Jackson. Concrete floors; owner, W. F. Whittier; architect, E. R. Swain; contractor, Geo. Goodman; signed, Aug. 16; filed, Aug. 27; cost $1816.

Lake Honda. Excavations; owner, Spring Valley Water Works; architect, Chief Engineer S. V. W. W.; contractor, A. E. Buckman; cost $4.45 per lineal foot and $9.00 for each thousand foot of lumber placed in position; signed, Aug. 19; filed, Aug. 21.

Sanders near 16th. To build; owner, A. Daveggio; architect, H. Hess; contractor, A. Christensen; signed, Aug. 16; filed, Aug. 16; cost $1620.

Leavenworth and Post. Bulkhead wall; owner, Levi Strauss; architects, Wright & Sanders; contractor, Geo. Goodman; signed, Aug. 1; filed, Aug. 15; cost $1111.

Leavenworth and Post. Granite coping, etc.; owner, Levi Strauss; architects, Wright & Sanders; contractors, Raymond Granite Co.; signed, Aug. 6; filed, Aug. 16; cost $1600.

Leavenworth and Post. Iron and bronze work; owner, Levi Strauss; architect, Wright & Sanders; contractors, S. F. Novelty & Plating Works; signed, Aug. 6; filed, Aug. 16; cost $1250.

Market near 5th. Iron stairs; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractors, Western Iron Work; signed, Aug. 2; filed, Aug. 2; cost $15,250.

Mason near Geary. Lathing and plastering; owner, Hall Assn. N. S. G. W.; architect, A. C. Lutgens; contractor, Arthur O'Brien; signed, July 17; filed, Aug. 13; cost $1311.

Mason near Geary. Painting and varnishing; owner, Hall Assn. N. S. G. W.; architect, A. C. Lutgens; contractors, Eutot & Gibson; signed, June 14; filed, Aug. 3; cost $1130.

Mason near Geary. Electric light wiring; owners, Hall Assn. N. S. G. W.; architect, A. C. Lutgens; contractor, Mathews O'Brien; signed, Aug. 14; filed, Aug. 15; cost $1300.

McAllister near Devisadero. To build; owner, J. H. Stein; architect, W. Koenig; contractors, W. H. and T. Kinread; signed, Aug. 26; filed, Aug. 26; cost $2100.

McAllister near Scott. To build; owner, T. J. O'Brien; architect, M. J. Welsh; contractor, Jas. J. O'Brien; signed, Sept. 5; filed, Sept. 11; cost $810. Electrical work, contractor, The California Electrical Work, $161. Plumbing, J. E. Britt contractor; cost $613. Painting, etc., Quadt & Co. contractor, cost $78.

McLea Court near 9th. Two two-story frames; owner, Geo. Pecker; contractor, C. Andresson; signed, Aug. 9; filed, Aug. 28; cost $1300.

Moss near Howard. Completing a partly finished building; owner, J. Sanders; contractor, P. L. Bassett; signed, Aug. 14; filed, Aug. 16; cost $2500.

Montgomery and California. Metal grill work; owner, Cal. Safe Deposit and Trust Co.; architect, H. A. Schulze; contractors, Schnader & Lutze; signed, Aug. 13; filed, Aug. 13; cost $[illegible]93.

Mission near Fourth. Carpenter work; owner, A. W. Wilson; architect, B. F. Henriksen; contractors, Peterson & Olson; signed, Aug. 28; filed, Aug. 29; cost $11,100.

Mississippi near Butte. To build; owner, J. Mattson; architect, R. A. Herold; contractors, O. L. Wold and L. D. Ottman; signed, Sept. 1; filed, Sept. 5; cost $2063.

Ney and Congdon. To build; owner, Antone Metten; contractor, R. Trost; signed, Aug. 5; filed, Aug. 13; cost $1095.

Noe near Day. To build; owners, Peter Bernard and Julia Herzog; architect, C. A. Berger; contractor, Frank Doyea; signed, Sept. 2; filed, Sept. 5; cost $1700.

Ocean House Road near Arlington Av. Grand stand and Paddock; owner, Pacific Coast Jockey Club; architect, T. J. Welsh; contractor, A. L. Campbell; signed, Aug. 14; filed, Aug. 15; cost $26,064.

Ocean House Road near Arlington Ave. Stalls 480 to 600; owner, Pacific Coast Jockey Club; architect, A. M. Allen; contractor, A. L. Campbell; signed, Aug. 26; filed, Aug. 29; cost $37.35 stall erected.

Page near Cole. To build; owner, Ferdinand Epel; architect, E. R. Swain; contractor, R. Trost; signed, Aug. 12; filed, Aug. 13; cost $3175.

Page near Broderick. To build; owner, Henry Myers; architect, W. H. Lillie, contractors, F. G. Kronnick & Bros.; signed, Aug. 10; filed, Aug. 13; cost $3350.

Ridley near Sanchez. To build; owner, James Hagerty; architect, M. J. Welsh; contractor, James J. O'Brien; signed, Sept. 10; filed, Sept. 11; cost $3400.

Sacramento and Laguna. Gas fitting, etc.; owner, Horace L. Hill; architect, W. J. Mathews; contractor, W. S. Snook & Son; signed, Aug. 22; filed, Aug. 24; cost $1784.

Sacramento near Walnut. To build; owner, Thomas K. Kelley; contractor, T. F. Mitchell; signed, Aug. 15; filed, Aug. 17; cost $2550.

Second Ave. near California. To build; owner, Geo. A. Jackson; architects, Herman & Swain; contractors, Moore & Cameron; signed, Aug. 27; filed, Aug. 27; cost $1240.

Second Ave. near California. To build; owner, Mrs. Emma Hinds; contractor, Hans Peterson; signed, Aug. 7; filed, Aug. 20; cost $1950.

Shotwell and 26th. To build; owners, J. H. and Charles Buttmann; architects, Hermann & Swain; signed, Aug. 26; filed, Aug. 26; cost $2000.

Silver near 2d Ave. To build; owners, Wm. and Sarah Kennett; architect, F. B. Wood; contractor, John Dyar; signed, Aug. 31; filed, Sept. 2; cost $3940.

Silver near 2d. To build; owner, J. W. Dreyer; architect, A. H. Wilsdm; contractor, T. C. Cockrane; signed, Aug. 14; filed, Aug. 15; cost $3550.

Sixth near Channel. To build; owner, Albany Lumber Co.; contractor, Wm. Linden; cost $1200.

Stanyan near Fulton. To build; owner, Mrs. C. R. Richardson; architect, M. J. Welsh; contractor, H. Jacks; signed, Sept. 10; filed, Sept. 11; cost $4225. Plumbing, Geo. Humphreys contractor, cost $529. Painting, M. J. Donovan contractor, cost $455.

St. Marys street. Brick building; owner, Mrs. S. M. Blumenberg; contractor, Wm. Bayford; signed, Aug. 4; filed, Aug. 12; cost $500.

St. Marys street. Brick building; owner, Mrs. S. M. Blumenberg; contractor, J. E. Sweeney; signed, July 22; filed, July 22; cost $1127.60.

Sullivan near Stanyan. To build; owner, C. H. Backe; contractor, John J. Walsh; signed, Aug. 12; filed, Aug. 13; cost $1940.

Taylor and Pleasant. To build; owner, Emile M. Pissis; architect, Pissis & Moore; contractors, Gardner & Boyden; signed, Aug. 10; filed, Aug. 12; cost $8869.

Taylor and Lincoln. To build; owner, Luigi Demartini; architects, Wm. Mooser & Son; contractor, R. P. Sanchez; signed, Aug. 15; filed, Aug. 16; cost $3375.

Telegraph near Omondago. To build; owners, Mr. and Mrs. L. Renner; architect, M. J. Welsh; contractor, I. W. Coburn; signed, Sept. 7; filed, Sept. 7; cost $1840.

Twentieth near Guerrero. To build; owner, Richard Barry; architect, C. J. I. Devlin; contractor, James Irwin; signed, Sept. 5; filed, Sept. 11; cost $2599.

Twenty-second near Florida. To build; owner, John H. F. Richtotieg; contractor, L. Oversterland; signed, Aug. 14; filed, Aug. 14; cost $2300.

Twenty-fourth near Hampshire. To build; owner, Thomas Gagan; contractor, T. F. Mitchell; signed, Aug. 14; filed, Aug. 15; cost $2950.

Union near Jones. Carpenter work, etc.; owners, Kalz & Sons, architect, A. C. Lutgens; contractor, W. Tegeler; signed, Aug. 13; filed, Aug. 15; cost $2925.

Union near Jones. Excavations, etc.; owners, Kalz & Sons; architect, A. C. Lutgens; contractor, J. F. Wagner; signed, Aug. 13; filed, Aug. 15; cost $1297.

Union near Devisadero. To build; owner, Mrs. Mary B. Agus; architect, J. H. Littlefield; contractor, O. E. White; signed, Aug. 23; filed, Aug. 26; cost $6488.

Union near Devisadero. Excavations, etc.; owner, Mrs. Mary Agus; architect, J. H. Littlefield; contractor, H. H. Larsen; signed, Aug. 23; filed, Aug. 24; cost $1303.

Union near Devisadero. Additional contracts; owner, Mary B. Agus; architect, J. H. Littlefield; concrete, Keatinge, Leonard & Ransome, cost $925; plumbing, etc., Flood & McDonald, cost $490; painting, Charles Cornberger, $190; mantels, not let, $725; gas fixtures, etc., $870; total cost $4670.

Waller near Laguna. To build; owner, William L. Helke; architect, W. H. Sorrell; contractor, D. Currie; signed, Sept. 7; filed, Sept. 11; cost $4759.

Washington near Webster. To build; owner, Sidney M. Smith; architects, Bugbee & Gash; contractors, M. C. Brennan & Sons; signed, Aug. 17; filed, Aug. 17; cost $5600.

Webster near Green. Five two-story frame dwellings; owner and builder, J. B. Mathison, cost $50,000.

Welsh near Fourth. To build; owner, Jeremiah McCarthy; architect, A. J. Barnett; contractor, L. Westerlund; signed, Aug. 27; filed, Aug. 27; cost $2300.

Williamson near Pt. Lobos. To build; owner, M. E. Guilden; contractor, O. W. Forsyth; signed, Aug. 6; filed, Aug. 20; cost $1250.

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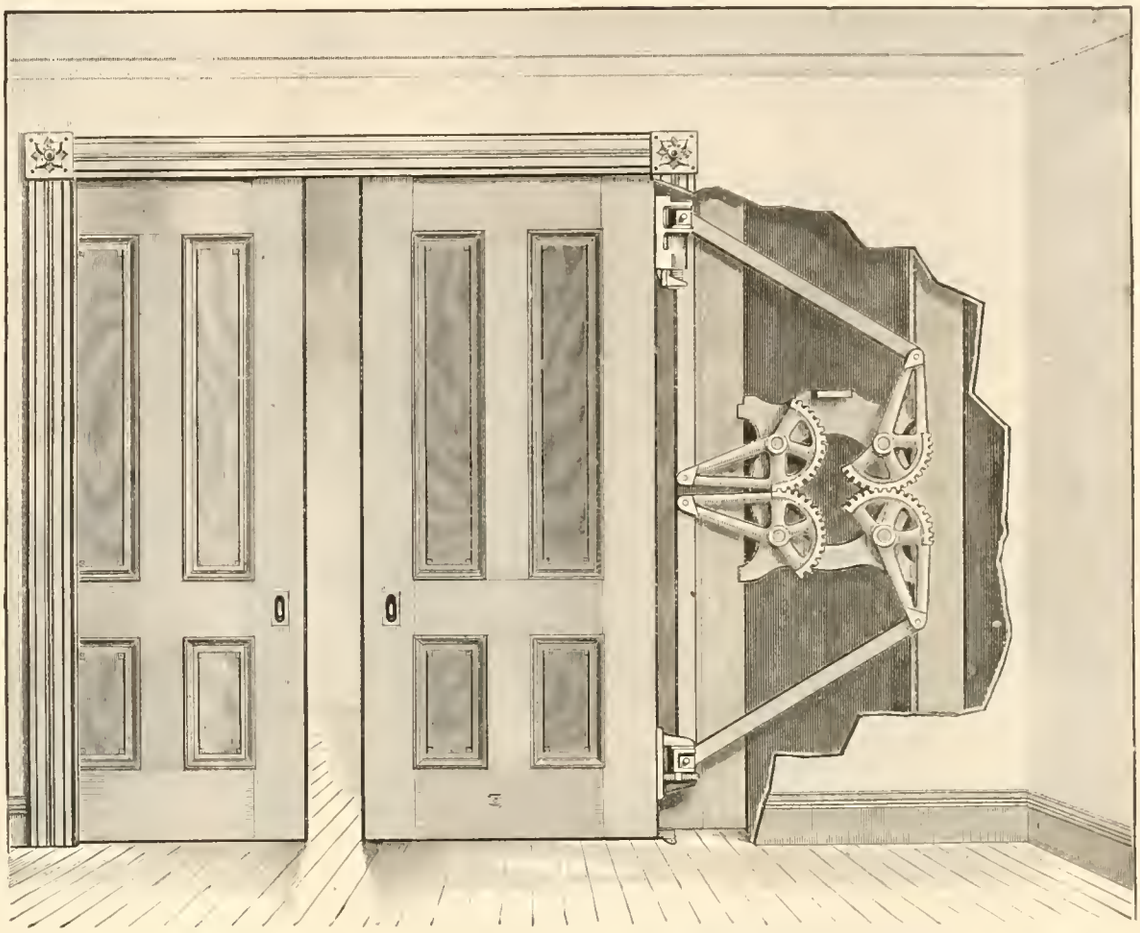

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Pine near Broderick; S. F. Paving Co. vs. T. P. and T. A. Woodward; $479.

Bush and Broderick; Same vs. Petit; $403.

Brodereck near Pine; Same vs. J. B. and F. R. Stanford; $130.

Gough and Greenwich; S. F. Tucker vs. Antonia A. C. Bonelli; $307.

Bay and Hyde. Flinn & Treacey vs. J. J. O'Farrell trustee, and Kennedy Trust; $$1116.

Hyde near Broadway; W. H. Malott vs. Cornelius Harrigan, M. A. Steuart and F. W. Maurice; $61.00.

Devisadero near O'Farrell; City Street Imp. Co. vs. R. Anixtel $65.

Twenty-second near Capp; Same vs. C. Verreokt; $637.

Broadway near Octavia; Jordan Pav. Co. vs. W. Hinkle; $457.

Broadway near Laguna; Jordan Pav. Co. vs. Co. vs. S. Seibenhauer; $205.

Broadway near Laguna; Jordan Pav. Co. vs. M. Moonoy; $626.

Liens have been pl c Pav. Co. on ptoperty, Chattanooga street bet. 22d and 23d; Mrs. A. Tighe, $60—Jas. Berry $55; F. O. Aubrey, $77—F. A. McNally,

Devisadero near Clay; Flinn & Treacey vs. Emmeline Marcus nee Carter; $144.

Seventh near A; Francis Harrison vs. J. Hemey, John C. and Nancy Shea; $75.

Buckley and Van Deusen vs. Same.

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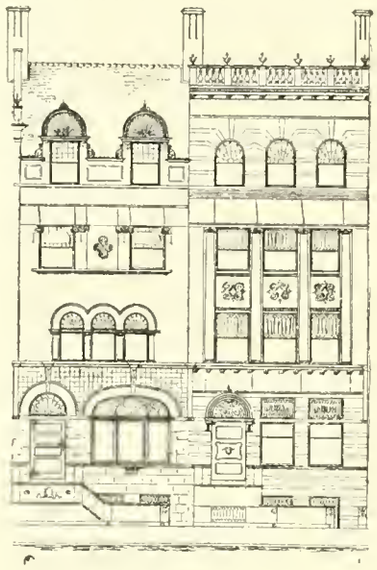

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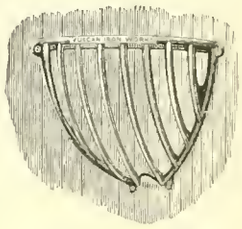

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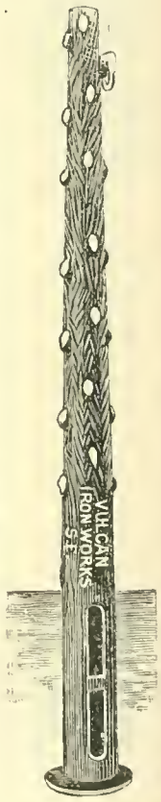

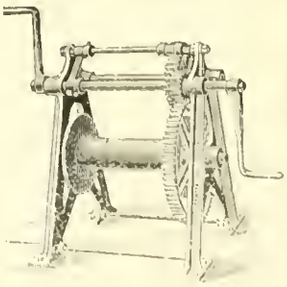

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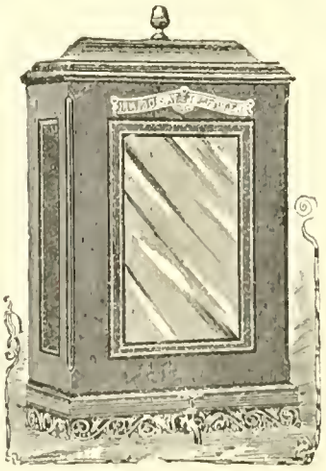

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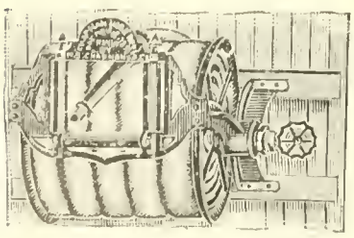

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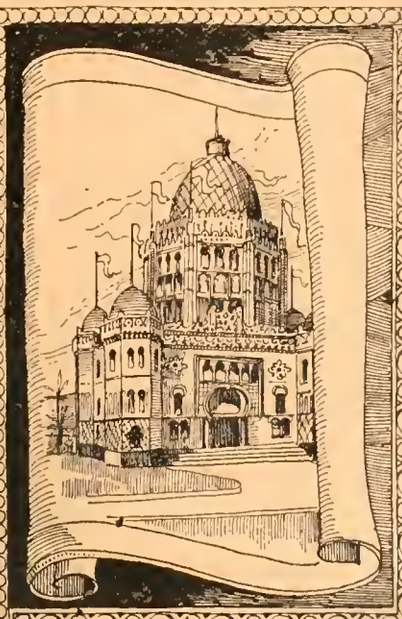

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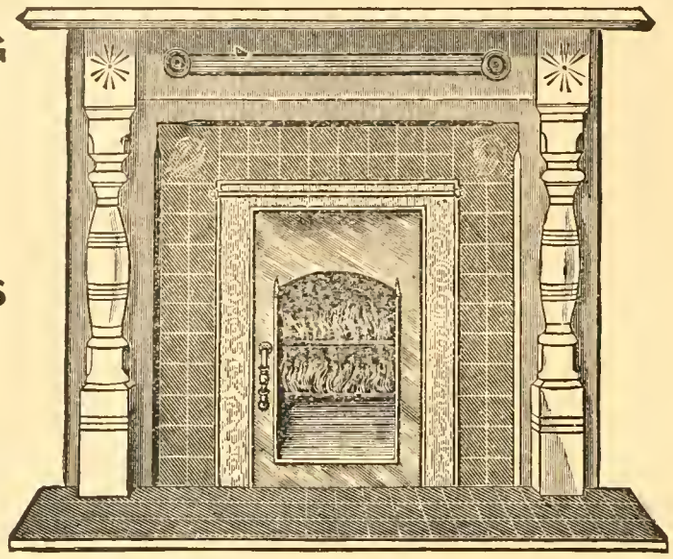

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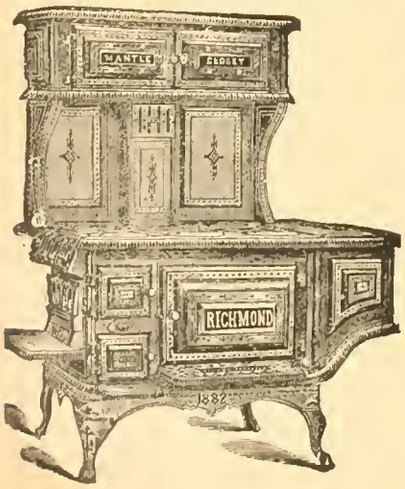

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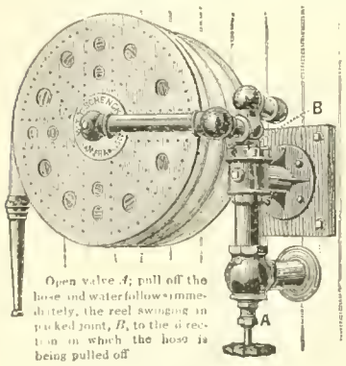

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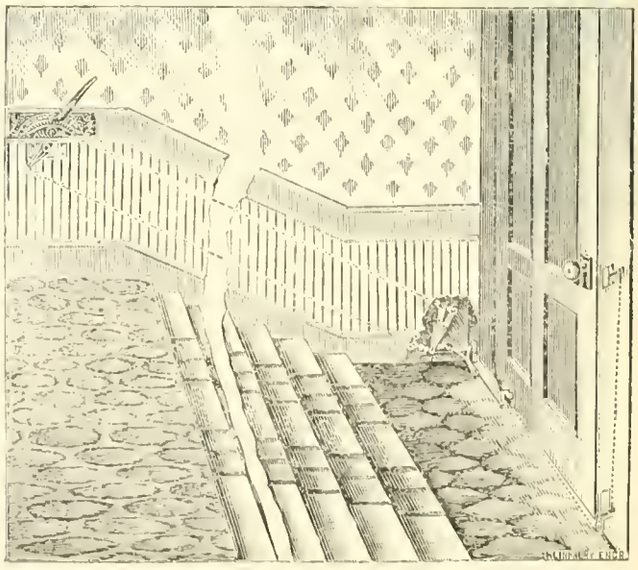

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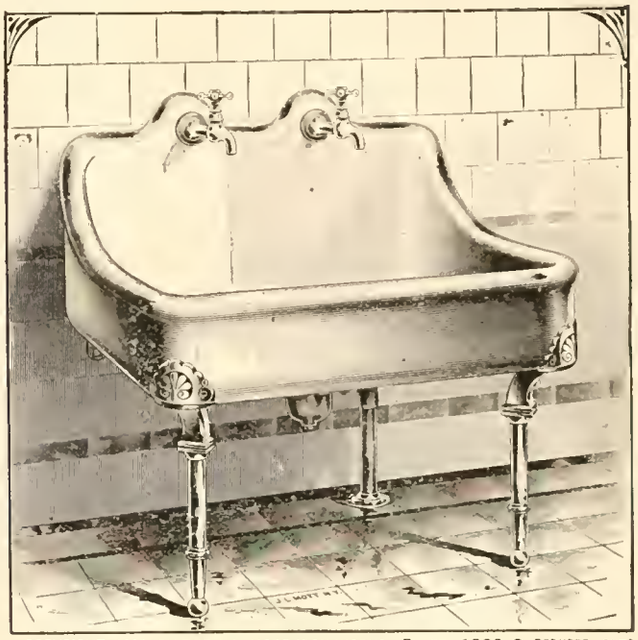

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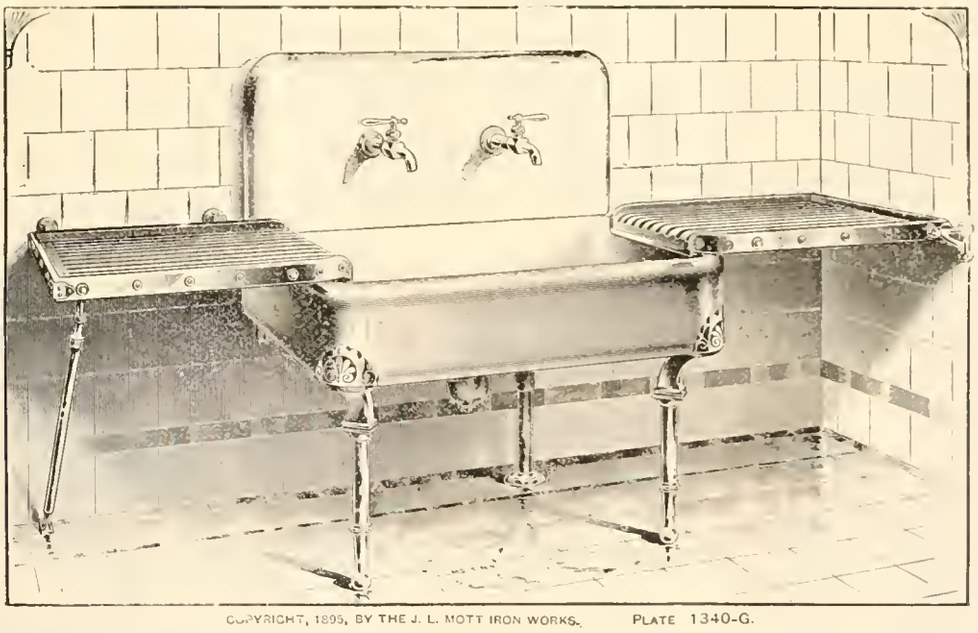

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PLATE 1340 G. shows the Imperial Porcelain Sink with an Imperial Porcelain Back instead of Marble, fitted up same as Plate 1339 G. but with Drain Board. This Drain Board (patent applied for) is an important adjust to a Kitchen Sink, and is specially devised for use with Roll Rim Sinks and fulfils all practical and sanitary requirements. It is entirely free from the wall, one end being supported by the Sink and the other by Cast Brass Brackets or a leg. The corner Drain Board of Plate 1340 G. swings on the hinges shown at the right. The end Drain Board swings on the hinges at back, the supporting leg being telescopic and folding as the Board is raised so that the Board can be swung up out of the way when it is desired to clean the wall. The Board is made of selected Ash the pieces being tongued and grooved and with rod passing through to insure non-warping. The rim along the three sides of the board prevents dishes falling off, also water from dropping to the floor.

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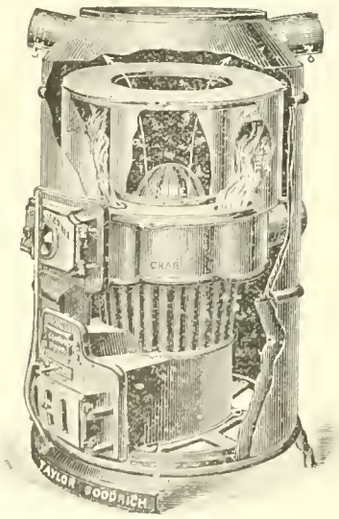

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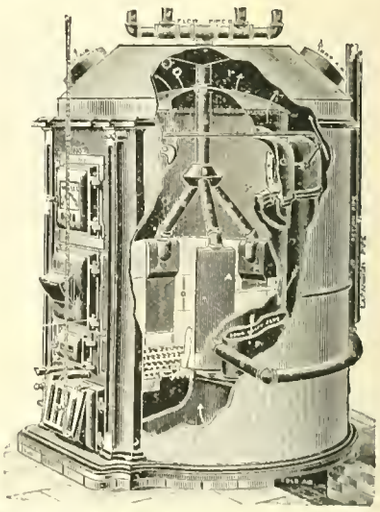

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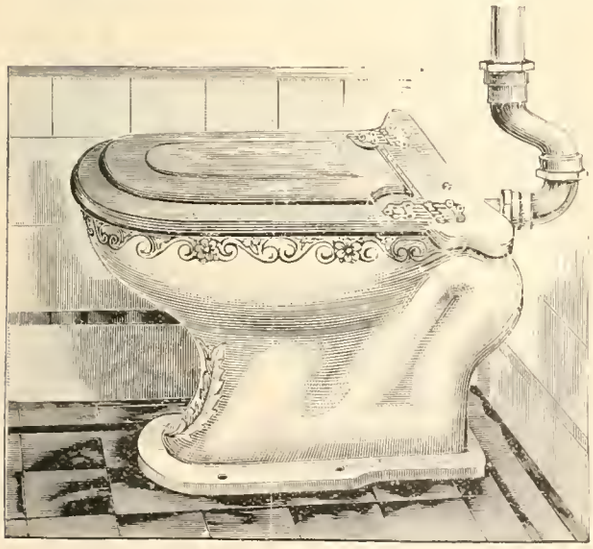

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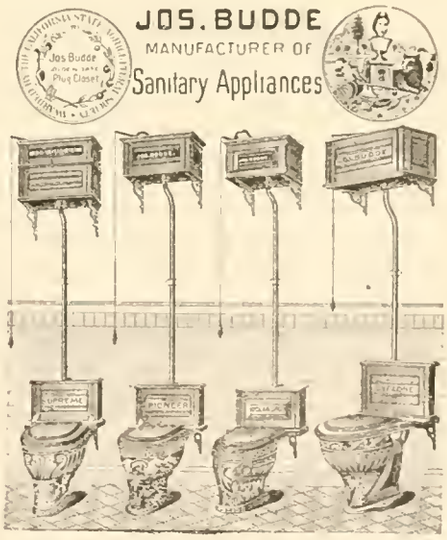

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IT is undoubtedly a fact that the business of this generation is controlled by different principles and conditions than have heretofore obtained. Our predecessors were content to achieve success. The merchants of to-day are not content with success alone, but must strive for the extermination of business rivals, by combinations that do not seem to us to be founded on principles of right and justice, but on the contrary that seek to destroy that equality of opportunity that we have so long boasted was guaranteed us by the Constitution of the United States. Our legislation has in vain attempted to suppress or control these combinations when they have become so powerful as to threaten the well being of society, but until a healthy public opinion is found strong enough to effectually discountenance such proceedings, but little permanent improvement can be hoped for. As a case in point we understand the Master Plumbers' Association of San Francisco, have entered into an agreement with the jobbers of plumbing supplies of this City, that in consideration of the members, belonging to the association, buying all their supplies from the jobbers of this city, exclusively, the jobbers on their part will sell plumbing goods only to those that are members in good standing of the Master Plumbers' Association. We believe there are over 200 licensed plumbers in this city, of which over 100 belong to the association. By reason of this action, nearly, or quite one-half of the licensed plumbers of this city will be obliged to go out of business, be forced into joining the association, or go abroad for their supplies; which, in many cases would work a great hardship on them by reason of not being known abroad, and only wanting goods in small quantities it would not pay them to do so. It is well known that all fine plumbing goods, such as bath tubs, and other specialties are not manufactured on this Coast, and have to be imported from the eastern manufacturers; and although we strongly believe in encouraging home products as also giving to local business houses their patronage in preference to buying abroad we cannot conceive how any business man should be obliged to buy such goods in this market from local houses when he can buy the same goods abroad for less money. It appears to us a hard matter for one set of men to band themselves together and say to others, "You must join with us or we will drive you out of business." In this case the point cannot be made that it is sending money abroad, that can be kept here, for in any case the jobbers would have to order these goods from the East and send the money there to pay for them. Plumbing has now arrived at such a point, that only the very best sanitary appliances should be used. And as we have remarked to a very great extent this class of goods are only manufactured by the large Eastern concerns, the policy should be to buy this class of goods where they could be bought the cheapest, and thus enable owners to get the best goods for the least money. To say to any set of business-men, "You must buy your goods where we dictate," is arbitrary, unbusiness-like, and against public policy. The tendency in all business now is to deal directly with the manufacturers and not through secondary parties or middlemen whenever it is expedient to do so. We are certainly in favor of trade

organizations for their mutual benefit and advantage, but on the question of individual members of same being dictated to as to how or where they shall buy goods appears to us as going beyond the province of associations of this kind.

THE hightest talent in the way of Architecture should be enlisted to provide a design worthy of such an occasion as the erection of an enduring and monumental building such as that for the Affiliated Colleges about to be erected in San Francisco.

It is therefore to be hoped that the Board of Regents of the University and the Commissioners Appointed from the Affiliated Colleges will see their way to open the plans to competition either by all or by a selected few—in either case providing liberal premiums to the unsuccessful—and thus encourage their sister profession of architecture, who although not having the good fortune to be housed in the contemplated building will however thus have a hand in putting up a monument worthy of the use of the other professions.

AS the height of buildings in this City of San Francisco has been decided upon as 125 feet for streets over 100 feet wide and 100 feet for those under, we make a resume of the arguments *pro* and *con*.

1st. The advocates of high buildings argue that limiting such height would work an injustice to those capitalists who have invested in land at high figures in the central part of town—and who cannot now make interest on their investment unless the number of stories in their buildings are large enough to allow of rents sufficient to pay such interest.

To which the advocates of low buildings reply that the interests of the public at large and those of adjoining or opposite owners who may not be blessed with so much worldly goods as the high building capitalists are in the aggregate more important than the interest on the investment of those few who are able to put up such high buildings.

2d. The high building advocates secondly state that the appearance of a town is improved by having high buildings, in that it makes such City appear of a more business-like character or more metropolitan—and that therefore the wellfare of any City is subserved by having tall buildings therein.

This is answered by their opponents by stating the fact that the two most metropolitan cities in the world London and Paris have no tall buildings in the modern acceptation of the word and have stringent laws preventing the erection of the same and it is only where by reason of topographical causes such as work both in New York and Chicago that we find so many of them.

3rd. Another reason giving for the existence of high buildings is that it concentrates commerce and business in small area and thus allows the same to be transacted easier.

To which is replied that the health of those engaged in their business who are compelled to spend a good part of their lives amongst these surroundings is more important even taking it in an economical sense than the small gain by such concentration—and the increase of land values on the outskirts of the business area—by having the business part of a town spread latitudinally compensates fully any inconvenience caused by the greater distances of said business area.

It seems to us that all these conflicting interests would be harmonized by the adoption of the rule that no part of a building on one side of a street should extend beyond a line drawn from the foot of the building on the opposite side of the street, at an angle of forty-five degrees, this gives the public and the adjacent owners of property their share of sunlight and air—and at the same time allows a man to build as high as he likes on the rear portion of his lot, as long as he does not obtrude upon that forty-five degree line.

HIGH BUILDINGS.

THERE are evidences that we are soon to have in this City a renewal of that controversy over high buildings which began years ago in Chicago, was continued in New York and other cities of the East, and has been practically concluded in that section of the country by a victory everywhere for the advocates of the new form of architecture.

The objections to high buildings, or "skyscrapers," as it is the fashion to call them, grows out of the natural conservatism of man. Some people dislike any change simply because it is a change. Others see that a change in any one thing will break the existing relation with other things around it and fear the new condition will entail danger or loss somewhere. One of these objects is about as futile as the other. Changes for the better there have been since the world began and must be so long as man is capable of learning new things. Nor does any one change long disturb the harmony of the complex relations of life. It simply brings about other changes in other things until a new adjustment is reached and thereby proves not only a benefit itself but the cause of further benefits in many ways.

Tall buildings are a development of the age, and, like all such developments, have resulted from needs engendered by existing conditions. No one planned them as an inspiration. They grew by slow degrees in response to the demands of modern life. If they introduce new problems they brought also the answers with them. They have been opposed everywhere and everywhere they have been accepted. A hard fight was made against them by the Fire Department in Chicago, but it ended not by checking the buildings but by improving the fire service; and so great was the improvement that only a short time ago the Chicago *Times-Herald* predicted a complete revolution in the methods of fighting fire in that city before the close of the year.

The high building, as we have said, did not come by inspiration of genius. It is a need of the time. A law prohibiting such buildings would lower the price of every foot of land anywhere near the center of the City. No one would purchase a lot at a high price if he were not to be permitted to erect upon it a building high enough to obtain in rents a fair return upon his investment. If the landowners of San Francisco are to enjoy as full use of their property as land-owners in other American cities they must

be as free here as elsewhere to make every use of modern architecture and engineering in improving their property by the constructions of such buildings as the requirements of the time demand.

It is hardly likely that the controversy here will be waged either so long or so warmly as it was waged elsewhere. It is in fact a virtually exhausted issue. It has been argued over and over in the East, and every possible problem involved in it has been discussed and solved. It is no longer a question between New York and Chicago as to whether they shall have high buildings, but as to which shall have most and highest.—*Call.*

TALL BUILDINGS.

WE have received the following from one of our correspondents, but don't propose to become responsible for the remarks made therein.—*Ed.*

"Get out of my sunlight" said Diogines as he past, but as he turned to see whence came the obstacle to his sunlight he saw how futile were his commands and passed on as quickly as his easy going temperament would allow out of the Shadow of Death caused by the Tall Buildings. "Duce take these tall buildings," remarked the young lady, "I shall have to wear my bloomers in the future," rough Boreas by the aid of the tall buildings twisted her skirts, threw her cape over her head and otherwise maltreated her. As the philosopher and philantropist came along the problem came to them as they shivered and craned their necks to take in the monstrosity—"What must be the power of greed that prompts a fellow man to destroy his neighbor's health by depriving him of what ought to be free to all—Light—to destroy the beauty of the City in which he lives by ill proportioned erections and prevents his fellow property owner from gaining the advantages of an extension laterally of the City—and form a menance to the citizens when mother earth takes to shaking herself or the fire fiend lights up its inaccessible lights.

THE HEIGHT OF BUILDINGS.

IT is a familiar doctrine of the common law that one who owns a piece of land owns from the center of the earth to the very sky itself. His fee simple title is not to be questioned, save where he infringes upon or interferes with the rights of his neighbors.

There is a tendency in recent years to modify the rule of the common law, but such tendency should never be extended beyond reasonable limits. For example, the restrictions sought to be put upon the height of buildings in this City should be tested by the canons of expediency and common-sense, and there should be no limitation fixed upon the construction of a building unless some good and sufficient reason can be given for it.

In many of the European cities, where the streets are so narrow as to be only lanes or alleys, it is obvious that high buildings must be a serious detriment to those who inhabit the sunless side of the street, but in a City like this, where the streets are sixty, eighty and even more than 100 feet in width, that argument possesses no force or validity. A solid block of fifteen-story buildings on Market street could not exclude air or sunlight from these on the opposite side of the street.

Modern buildings in the business portion of a city are uniformly built as nearly fireproof as possible, and hence the Fire Department argument cuts little or no figure. If those members of the Board of Supervisors who seem to be so strongly opposed to high buildings would take action in behalf of an extension of the fire limits they would do much more to guard against the risk of a general conflagration than by objecting to tall buildings.

The height of buildings is purely comparative and it would be just as reasonable for the owner of a one-story cottage to object to his neighbor building a two-story house as for the owner of a six-story business block to object to his neighbor erecting a twelve-story building. As to sanitation and all that the term involves there is no modern building in the City which is not thoroughly supplied and equipped with the best of sanitary appliances.

It would be interesting to know the source of this newly developed zeal against high buildings in this City, when it is perfectly well known that all the high buildings, beginning with the Chronicle building, which was the pioneer, are models of fire-proof, well-ventilated and thoroughly sanitated structures. There is something more in this recent movement than appears on the surface.—*San Francisco Chronicle.*

THE ANTI-HIGH-BUILDING MANIA.

THE anti-high-building mania has extended to San Francisco. It would seem impossible for it to go further westward, were it not that the United States has territory extending as far to the west of that city as it has to the east of it. But San Francisco is far enough. It is hard to understand the agitation that has arisen against these vast modern structures. It is true few architects know how to design them, and most of those who have undertaken to explain why they should be banished from off the face of the earth have not been noted for the manner in which they have solved this difficult problem. I trust I will not be deemed too personal when I say I should be glad to own a dozen of such structures, and I will undertake to point out a million people in New York alone who entertain the same opinion. Surely every architect who condemns them would be glad enough to get an opportunity to design one every six months or so.

The truth is the high building problem is not one to be decided by architects or building law commissions. It concerns questions of law, of equity, of real estate, of municipal development, of public convenience, of business methods, of a host of things the architect has no business with, and of which, on other questions, he would have nothing to say. The problem is one that will settle itself; the moment the market is over supplied their erection will come to an end, and the agitators will have to find other things to talk about.

A very narrow street, lined on either side with fifteen and twenty-story buildings, is something dreadful to think of, no doubt. Yet if I owned a piece of land, and my neighbor built up twenty stories, I should not sit down quietly under a law that, a few years later, said I could only build to half this height. Nor should I, were I a real estate man, feel pleasantly toward the architects and other busybodies

who had been instrumental in securing the enactment of such a law. The large cities do not suffer the danger from the large office building, well built, well lighted, provided with every comfort and convenience, carefully watched—a scientific monument of the resources of our time—as they do from the little old houses of the back streets, filled with squalor and filth of every description, and harboring, it may be, the larger part of the city's population. Communities engaged in regulating the dimensions of buildings might make an application of the warning not to take the mote out of their brother's eye while there is a beam in their own. Let the cities get rid of the bad first, and then see what can be done to make the good better.—*Architecture and Building.*

INSPECTION OF STEAM BOILERS.

THE Boston Manufacturers' Mutual Fire Insurance Company, which is often the first to investigate matters related to the art of building, publishes a circular of great interest, in which it says that it has always declined to undertake boiler insurance, but that, under a recent statute of Massachusetts, all users of boilers will be obliged to insure them in an authorized company, or to submit to a State inspection, says *The American Architect and Building News*, which may be insisted upon at inconvenient times, and may possibly involve the injury of the boilers by the operations of incompetent inspectors. As mill owners will not like either to run the risk of having their boilers spoiled, or blackmail levied on them, by political heelers, decked out as boiler-inspectors, or to be compelled to take out policies in a certain company, on the company's own terms, it has occurred to the Mutual Company, or rather, to Mr. Atkinson, its President, that it might be judicious to collect a body of information in regard to the construction, setting and use of steam-boilers, which would be useful to persons interested, and might form the basis for a rational system of insurance, similar to that which has revolutionized mill-insurance throughout New England, and, by cheapening the cost of manufactured goods, through the elimination of the greater part of the fire-losses incident to the business, which of course, are added in the long run to the price of the goods, has saved the consumers of such goods many thousands, perhaps millions, of dollars. In England, a Steam Users' Association already exists, under the charge of a very distinguished engineer, with headquarters at Manchester. This Association insures boilers, and its investigations, as our readers know, have had great influences on the designing of steam-plants in England. With the rapid development of our manufactures, it is quite time that something of the kind should be established here, and Mr. Atkinson's plan is a promising one.

He proposes that the members of the Mutual Company over which he presides, together with any others interested in the matter, who are willing to pay the three dollars subscription required of all the participants, should, if they have any real knowledge of the best material for setting boilers, of the method of avoiding waste of heat in baking the ground underneath, of the prevention of smoke, the best construction of chimneys, and the best type of boiler for a given service, furnish such information on the subject as they can. Meanwhile, two experts are to investigate boilers and steam making, one in Europe, and the other in this country, their inquiries to extend over a year. They will make occasional reports, which will serve, later, as a basis for general rules. These reports will be printed, without, however, disclosing the identity of the plant which may form the subject of a discussion, and the printed slips will be distributed among the subscribers. Of course, the work will only be undertaken if the subscriptions warrant it; but there should be no doubt of this, for the subject is one of immense importance to a great number of people. Many architects will, we are sure, be greatly interested in the results of the investigation. At present, every architect is called upon for advice in regard to steam-plants to be established in hotels, apartment-houses, stores and office-buildings. In many cases, the consumption of coal under boilers put in under his observation reaches several tons a day, and a saving of ten, or fifteen, or twenty-five per cent in coal is of great importance to the owners. As a rule, architects disclaim anything but the most general knowledge of steam-work, and would not undertake to give expert advice on the subject; but the ridiculous claims made to their clients by the drummers who represent various patent devices, and whose efforts to effect a sale would put Baron Munchausen to the blush, often call them out, in spite of themselves, in defence of the established principles of steam-production. Most of them would be glad to add to their store of knowledge on the subject, and it is certain that the reports, made under the auspices of Mr. Atkinson and his Company, would furnish as rational and well-considered information as it would be possible to obtain.

LOSS OF HEAT BY UNPROTECTED STEAM PIPES.

RECENTLY Mr. Albert Haacke fitted up an apparatus for measuring the amount of heat lost by radiation from steam pipes, and has published the results of some of his first experiments, together with a description of the arrangement. The tests were directed to determine the relative losses of heat from (1) bare pipes; (2) pipes covered with one inch of composition; and (3) pipes covered with one inch of composition and three layers of hair felt. The testing surfaces are represented in Mr. Haacke's arrangement by three cast iron steam pipes of five inches internal diameter and six feet long, with blank flanges on each end. These test pipes are supplied with steam that has been dried, and are placed so as to be subject to radiation and convection under precisely similar conditions, one being bare, the other covered with composition one inch thick, the third with one inch of composition and three layers of No. 3 felt, each one-half inch in thickness. The result of experiments with steam in the different pipes under pressure of from 45 to 60 pounds upward goes to show that a covering of composition one inch thick saves, out of a possible loss of 100 per cent, as much as 83.57 per cent, and if over this covering 1½ inches of hair felt with canvas is added, the extra saving is only 8.25 per cent. If one pound of coal is required to evaporate eight pounds of water into steam of 60 pounds pressure, then 6½ cwt. of coal are required every year to make good the loss of heat from every square foot of uncovered steam pipe. This loss is even greater in winter, or when pipes are exposed to cold air, or where steam of high temperature is used.—*Heating and Ventilation.*

CHICAGO ARCHITECTURAL CLUB.

THE Chicago Architectural Club held a "Bohemian Night" at the Club House, October 14, 1895. The delicatessen was provided by A. Woltersdorf and Hugo Arnold and was or was not hard to take according as the participant were in bad health or not.

Interesting competion drawings for a City House of Moderate Cost kindly loaned to the Club by the Brick Builder Publishing Company of Boston were on exhibition.

IRON SAND.

A PECULIAR industry in connection with the granite trade is the manufacture of iron sand. This curious and interesting process as carried on at the Pioneer Iron Works, Aberdeen, is as follows: Into an opening at the top of a firebrick cupola, with an outer casing of iron, are thrown from an elevated stage, coke and bits of old cast iron—railway wagon-wheels, cannon-balls, agricultural implements, etc. A fierce heat is kept up in the cupola by means of fans driven by a steam-engine. The metal when melted finds its way out at the foot of the cupola down a spout, and a powerful steam blast sends it flying in white-hotel spherical globules into a brick chamber containing a tank with cold water. On taking off the litter door at the observation hole, and peeping cautiously in so as to avoid a hot particle invading the eye, one can see the spherules dropping in a shower on the water, causing a host of tiny explosions. Such is the strength of the blast that the sparks fly out now and then at the chinks of the iron doors at the other end of the brick chamber, and strike the wall fifty feet at least from the cupola. Among old iron railway chairs are perferred. The writer of this paragraph on his visit saw an old cannon, twelve feet long, lying on the ground, ready to be broken up and cast into the smelting pot. The melting operations over, the water is run off the tank. The spherules are then collected and spread on sloping iron platforms to dry for a day or so. There are seven steam-pipes at intervals to aid in the drying part of the process. The material is then riddled by wire sieves moved by steam-power, and falling down a spout is collected and put up in cwt. bags for sale, or stored in the sheds in loose heaps. This portion of the premises is ventilated by a louvre ventilator and an iron funnel. It is in the riddling that the superiority of the Aberdeen plan over the system prevailing in the United States comes in. At the Pioneer Iron Works seven different sizes are produced, the present retail price of the finest being £6 a ton in Aberdeen. The sizes vary from a very fine powder to No. 1, which about equals No. 6 shot. Iron sand is, in fact, generally called chilled shot by granite workers in Aberdeen. Of the intermediate sizes No. 4 resembles clover seed in dimensions, and No. 3 would about equal the pellets known among sportsmen as sparrow-hail. Iron sand is used for sawing and polishing granite. For ordinary steam saws (which are made of mild steel) the largest variety is employed. These saws when in motion are fed with the iron sand and with water. The water washes out the iron sand, which is caught in a box and utilized over and over again until used up. For nice sawing, when the granite is cut perhaps an eight of an inch thick, to be polished on both sides for fancy caskets, samples, etc., the roughest kind is not used. The three finest grades are used in the first stage of machine polishing. When iron sand is used the stones do not require to be dressed so finely before being machine polished, as they did when sea sand was used. The employment of iron sand enables machine polishing to be executed about three times as fast as when sea sand was used, and about ten times less of it is necessary. Emery or sea sand is, however, used for hand polishing at all stages, and emery is also employed in the second stage of machine polishing.—*Stonemason.*

A UNIQUE CHURCH.

THE Presbyterian church society of Waterloo, Iowa, is possessed of an edifice which can well claim to be one of the unique buildings of the world, so far as relates to the material of its construction, for it is built substantially of stone taken from one hugh bowlder. The stone from which the church is constructed, says *The Architect, Builder & Decorator*, weighed more than 5,000,000 pounds, and was therefore about twice as large as the bowlder from which was hewn the pedestal on which stands the statute of Peter the Great in St. Petersburg, though not so large as the great bowlder called Pierre de Marmettes, at Monthey, in the cannon of Valais, on which a chalet was built. When in 1890, the Rev. C. H. Purmory and the members of the Waterloo Presbyterian church decided to erect a new place of worship and began to look for stone in a section where stone is scarce, their attention was called to what was apparently a very large bowlder situated two miles from Waterloo, a part of which projected eight feet from the ground. Work of excavating the great stone was begun. Eight feet of rich dark soil was penetrated, then six feet of sand of different strata and seven feet of blue clay before the bottom of the bowlder was reached. This clay indicated the ooze of a pre-glacial swamp where the ice floe had left the bowlder after carrying it from the far Northwest, and the sand showed the action of depositing water, which, for many years, had been preparing a moisture carrying flow on which afterwards was lain the thick stratum of loam. When exposed as the bowlder stood, it was found to be twenty-eight feet high, thirty feet wide and twenty feet thick. On this monolith the workmen began their labors with drill, powder and sledge, and soon the Napoleon of bowlders met its Waterloo. The pieces were carried to the pretty town, and in a short time a wonderful metamorphosis was apparent and the gigantic bowlder, after resting undisturbed and nearly buried by the deposits of ages, was transformed into a beautiful temple of a religion that was not dreamed of when the great stone started on its journey in the grinding embrace of a mighty glacier. The desire for a slight variety of color was all that prevented this bowlder from furnishing absolutely all, instead of substantially all, of the stone for the church. A few small bowlders of varying hues were used in the building to meet the requirement of architectural taste, and the result has been a most beautiful as well as unique church.

Mr. Whitewings—"Say, I hear you've been a-callin' me a fool. Uncle Pete—"I didn't call yer a fool. I ain't no sech fool as to say eberything I tinks."—*Munsey's Weekly.*

ONE ON THE LAWYER.

THERE is a story on record of an architect repudiating any connection with the building fraternity in the case of the late eminent and talented Mr. Alexander, the architect of Rochester bridge and several other fine buildings in the county of Kent. He was under cross-examination in a special jury case at Maidstone, by Sargeant—afterwards Baron—Garrow, who wished to detract from the weight of his testimony, and who, after asking him what was his name, proceeded thus: "You are a builder, I believe?"

"No, sir; I am not a builder; I am an architect."

"Ah, well; architect or builder, builder or architect, they are much the same, I suppose?"

"I beg your pardon, sir, I cannot admit that; I consider them to be totally different."

"Oh, indeed; perhaps you will state wherein this great difference consists?"

"An architect, sir, prepares the plans, conceives the design, draws out the specifications—in short, supplies the mind, the builder is merely the bricklayer or the carpenter—the builder, in fact, is the machine; the architect the power that puts the machine together and sets it going."

"Oh, very well, Mr. Architect, that will do; and now, after your very ingenious distinction with out a difference, perhaps you can inform the court who was the architect of the Tower of Babel?"

"The Tower of Babel, sir!" replied the witness. "There was no architect—and hence the confusion!"—*Ex.*

THREE GREAT CITIES.

IN all the countries of Europe, in the United States and in the Dominion of Canada there are, so far as recent and authentic figures show, 70,000,000 houses. There are 342,000 houses, some of them unsubstantial affairs, in the city of Tokio, one for every five people, so that the Japanese metropolis does not suffer from overcrowding.

New York has 115,000 houses, averaging eighteen residents to each. London, the greatest accumulation of inhabitants in the world, has 600,000 houses, or seven residents in each on the average. London has increased in this respect very rapidly, for at the beginning of the present century the number of houses was only 130,000, little more than New York has at this time. The population of London at that time (1800) was 960,000. It is now 4,200,000. So it has increased nearly five fold, but the number of houses has not increased in as large a ratio.

Paris has 90,000 houses. At the close of the Franco-Prussian war it had 70,000. At the close of the Napoleonic wars it had 28,000. The area of the city had extended meanwhile. The average number of residents in a house in Paris is twenty-five, which is about fifty per cent greater than in New York. The majority of public buildings in Paris are utilized for purposes of residence, especially upon the top floors, whereas in New York scores of the buildings in every street down town are given over exclusively to business purposes. In a square mile or more of the territory between Wall and Spruce streets and between Broadway and the East river there were at the recent election only 430 votes, representing a total population of 1750.—*New York Sun.*

TRINITY CHURCH, BOSTON.

ARCHITECTS, and other persons interested in architecture, who happen to be in Boston, should not fail to make a visit to Trinity Church, and study the detail of the new porch, on which the carvers are busily at work. It is hardly necessary to say that the work is interesting, and to the extent compatible with correctness of style, original; and this porch, which is thoroughly Romanesque in the variety and richness of its detail, has afforded a fine field for artistic expression. The opportunity has not been lost, and we do not know a piece of exterior architecture in this country of the same extent, which will hold the attention of a student for a longer time, and with more satisfaction. The staging, of course, affects for the present the lighting of the pretty little singing cherub heads which swarm in the cornices and gables, so that the necessary allowance must be made for all the circumstances; but even as it is, the richness and interest of the sculpture, the delicate profiling of the columns, contrasting with the deep shadows and the solidity of the massive stonework, produce an impression which, to our mind, cannot be obtained elsewhere on this side of the Atlantic. As to whether the alterations improve the original building, "that is another story."—*The American Architect and Building News.*

ILLUSTRATIONS:

The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

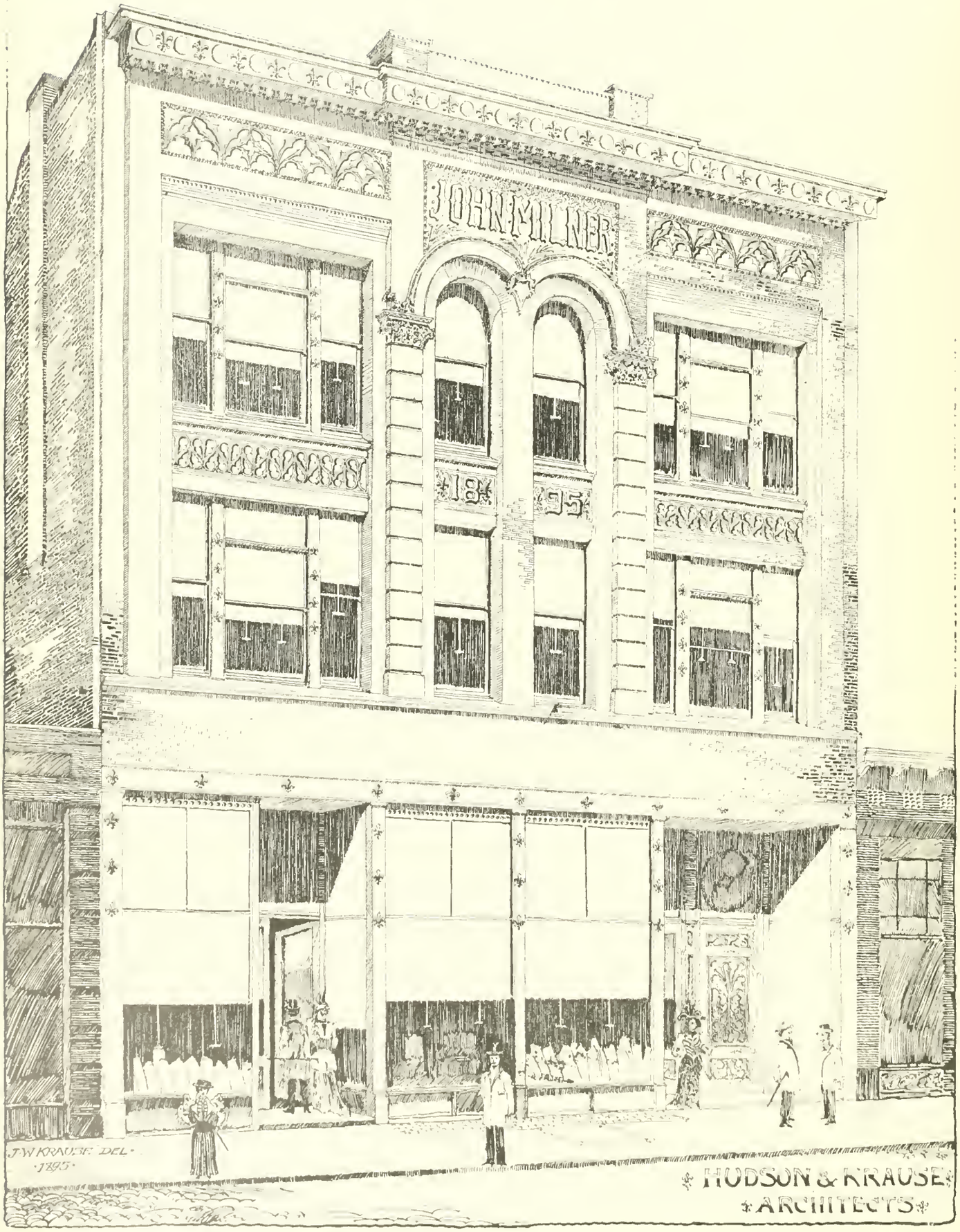
PRINCESS Angeline's Chief Seattle's Daughter Palace, J. W. Krause, 1894.

MILNER Building, Main street, Los Angeles; 40'x87' buff Roman brick; two stores and twenty-six rooms; plate glass front; Hudson & Krause, Architects, cost $18,000.

SKETCH for a Town Tower, C. L. Taylor, del.

WE received too late for publication in this number of our Journal, a valuable report of the Committee on "Strength of Bridge and Trestle Timbers," presented at the Fifth Annual Convention of the American International Association of Railway Superintendents of Bridges and Buildings at New Orleans, La., Oct. 15, 1895. Mr. Walter G. Berg was chairman of the committee.

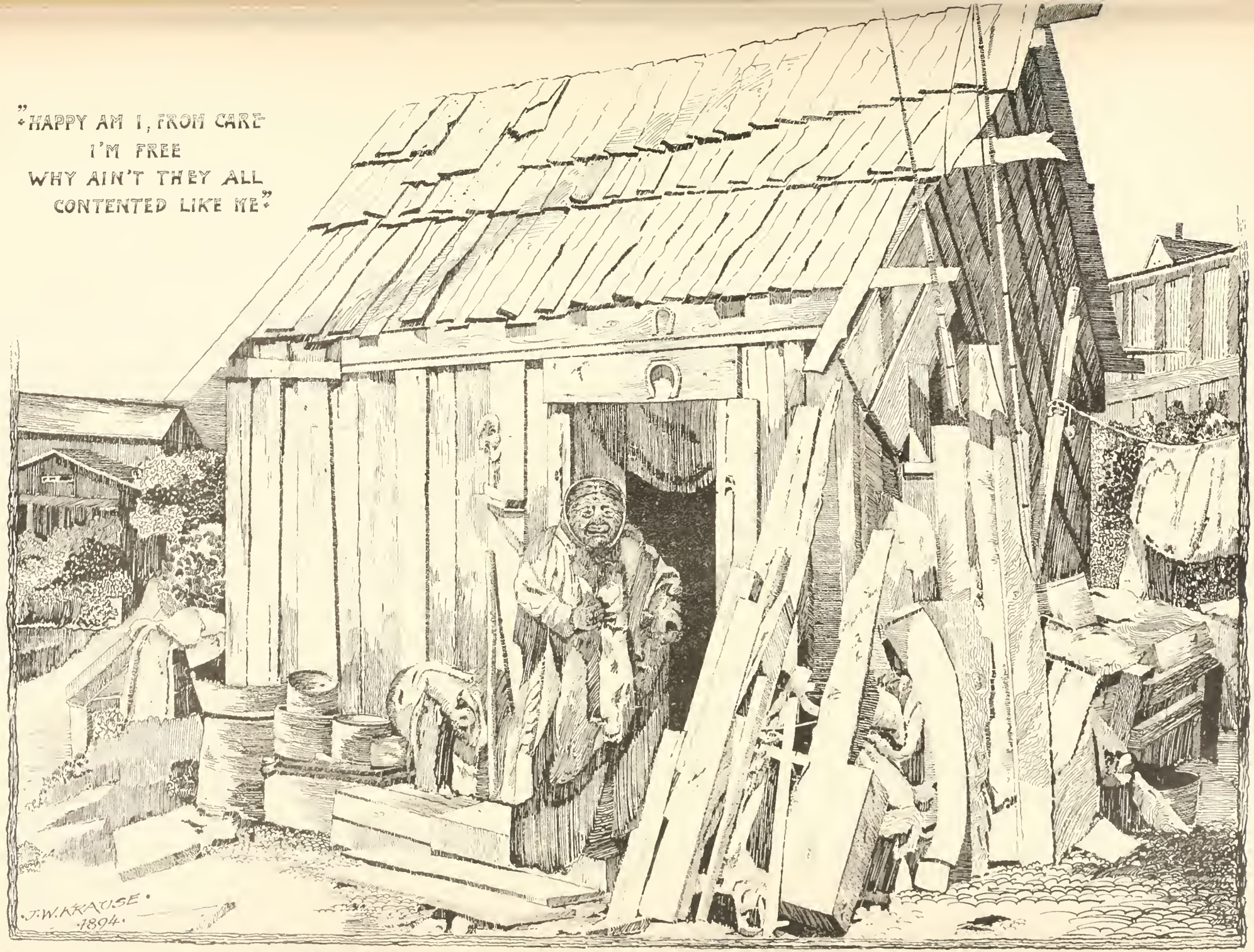
MILNER BUILDING
MAIN STREET
LOS ANGELES



HUDSON & KRAUSE
ARCHITECTS

TOWN· TOLLER·
TOWER· TIMER:

TELEPHONE
DRY GOODS
TAYLOR JR
DEL ET DEL. '95



PRINCESS ANGELINE'S, CHIEF SEATTLE'S DAUGHTER, PALACE

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. Geo. W. Percy, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

THE RIGHT OF AN ARCHITECT TO A LIEN ON A BUILDING.

A RECENT decision in the United States District Court in the Northern District of Ohio, gives the architect the right to a lien on a building for his services. The Judge in his decision says: "There is no reason in equity or law why the architect who conceives and puts upon paper the design of such an immense building as that involved in this case, and who puts upon paper with such minuteness of detail the specifications and drawings as to enable any one skilled in such business to erect, with perfect proportions and proper stability, such a mammoth structure, should not be protected in his contribution to the completion of such work as well as the carpenter, the plumber, the painter or any one who performs manual labor. The court certainly ought not to strain the statute to exclude labor of this high character and grade unless it is plainly the intent of the Legislature that it should bear such interpretation. The architect in this case is entitled to a lien not only for the plans and specifications, but for the labor and assistance in the construction of the building in pursuance of these plans." This seems certainly in accord not only with the dictates of common sense, but with the equitable rules of justice.—*Architect and Builder.*

SCHOOL OF ARCHITECTURE.

THE School of Architecture at the University of Pennsylvania opens this fall with the largest Freshman class in its history, a class more than double that of the previous year.

The recent growth of the School has rendered necessary the appointment of two additional instructors, which increases the teaching force to eleven. Mr. Frederick N. Mann, graduate of the Massachusetts Institute of Technology in 1894 and in 1895, and Gold Medalist in the competitions of last year of the Society of Beaux-Arts Architects, has been appointed to the Instructorship in Design and will have charge of the Junior work in this subject. Mr. Lewis Frederick Pilcher, graduate of Columbia College in 1895, will take charge of the work in Archæology and will assist in the general architectural studies of the first year.

ART AND LABOR.

I HAVE never seen in a city anything in the way of decoration upon the house of an American citizen which he had himself designed and wrought for pleasure in it. In the house of an Italian peasant immigrant in our own neighborhood, I have seen wall and ceiling decorations of his own design, and done by his own hand in colors. The designs was very crude, the colors coarse; but there was nothing of the vulgar in it, and there was something of hope.

Could men build their own houses, could they carve or fresco upon casing, door or ceiling any decoration which pleased them, it is conceivable that, under conditions of freedom and happiness, they should refrain from doing so. It is inconceivable that, adorning their own dwelling, in the gladness of their hearts, they should not develop something of grace, of beauty, of meaning, in what their hands wrought; impossible that their hands should work on unprompted by heart or brain; impossible then, as inevitable now, that most men's houses should express nothing of themselves save a dull acceptance thrust upon them.

Ellen Gates Starr.

A CHANCE FOR ARCHITECTS.

THE well-known political economist Professor Richadr T. Ely, in a paper devoted to the study of the practical results obtained by government ownership and control of railroads in Germany says: "One of the greatest improvements in Germany during the past fifteen years has been in the construction of stations. The railway stations in Germany at the present moment are so far beyond all controversy the most beautiful and convenient in the world, that for any one to deny it must be taken simply as a proof of ignorance or misrepresentation. These stations are constructed with a view to architectural effect. Before the station in Frankfort was constructed there was a prize competition of architects, just as there has been for the construction of the new Episcopal Cathedral in New York, and after the examination, the design which was regarded as i every way most satisfactory was selected. The result can be seen in that magnificent station which, taking it all and all, is probably the largest and most beautiful in the world."

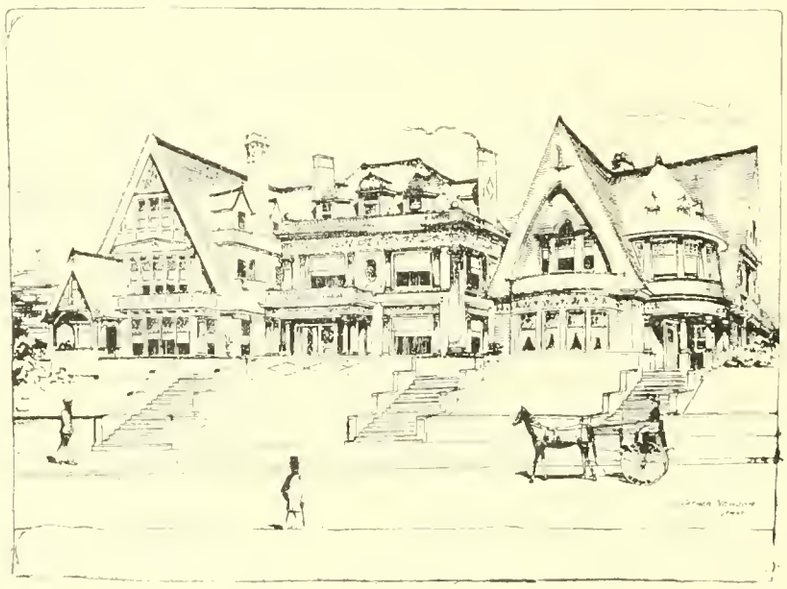
"Doctor, I wish you'd go up to Mrs. Blank's and see my friend Jarret, the actor—he is very sick." "Sir," replied the Doctor, "curing hams is not my specialty."—*News Letter.*

THE SMALL TOWN AND THE TROLLEY.

IN a short editorial the *American* calls attention to the decline of the small town. That this is a fact any one at all familiar with the older States recognizes at once. The writer at one time had occasion to take a trip over the post road running through the southern tier of countries in New York State and found many centres in a state of decrepitude where once was great activity. These towns were the stopping points of the old stage lines and were centres of large farming districts, and at the time of this trip the old taverns were dilapidated and blacksmith shops, harness shops, stores and all the business of a once thriving village departed and but the decaying shells left. This the old inhabitant attributed to the railroad destroying the business of the stage lines and removing the centres of business. Similar conditions may be found in all parts of New England, much of Pennsylvania as well as New York State. The question arises whether this condition of things is to be permanent and whether the great railroad lines are to continue to build up great towns and great cities at the expense of smaller rural towns, and cause the decadence of the surrounding farming districts.

In considering this question we must recognize new influences that are likely to have a large effect on these scattered settlements. One of the most powerful of them is likely to be found in the trolley. Its use is cities has long been recognized and its influence in the country is equally recognized, as is evidenced by the opposition of the great railroads to those roads where they paralleled their roads. The advantage of the trolley is to be found in the case with which they can be laid on the ordinary country road. These trolley roads can not only be adapted to passenger traffic but equally to freight, and may thus open again the old post roads and afford transportation facilities to vast sections without railroad facilities, and rebuild these old villages and improve farming districts where the expense of ordinary road transportation have cut them off from the markets. In fact the very roads that have been opposing them in the legislatures may find them their most important feeders. It seems quite within the bounds of reasonable expectation that the trolley may afford transportation facilities at such rates for farm produces, garden truck, milk and manufactures from farms and villages too remote at present from railroad centres to be under present conditions profitably produced, but which with such aid will become profitably industries. The difficulties of transportation consign to inactivity many farming sections and villages, under present conditions, which electric roads would turn into active and prosperous communities. It is certainly among the possibilities that electricity may bring about a renaissance of the old village and farm life that prevailed in the country fifty or more years ago. The healthy conditions that are to be found in small factory villages and on profitable farms are much to be desired, and it is possible the work of the trolley may be more far-reaching in its results than we at present anticipate.—*Architect and Builder.*

Lady (seeking a nurse girl)—"Is she not rather short?" Proprietor—"That is not an objection. You see, should she drop your child, it could not fall far."—*Pittsburg Bulletin.*



J. CATHER NEWSOM, ARCHITECT.

SALT WATER IN FIRES.

THE recent disastrous fire in San Francisco, when $1,000,000 worth of property was destroyed, shows the lack of a proper system of fire protection. The water pressure was altogether too low. With a view to remedying this evil, which is recognized by the authorities, the Olympic Salt Water Company of San Francisco, has for some months past been laying its mains, and intends to bid for the patronage of the city. The company proposes to offer the city free of cost all the salt water needed for sprinkling purposes in the section where their mains are laid and their hydrants set. Fighting fire with salt water is not an experiment, but has been successfully used in England for years. It has been proved beyond question that salt water is best adapted for fire purposes, and there are several reasons why this is so. First, the density of the water does not allow it to evaporate so readily, thus allowing it a longer period to get in its destroying power. Again, salt water weighs sixty-four pounds to the cubic foot, as against sixty-two pounds for fresh water. The difference of course is found in the salt. It is claimed that one service of salt water is equal to three in fresh. Returns from seventeen English

cities where salt water is used for sprinkling purposes show that the streets have gradually become macadamized. The mortality has also decreased from twenty to thirty per cent. The Olympic Company has a reservoir with an elevation of 320 feet above the city. The reservoir is on Point Lobos avenue, near Josephine street, and has a capacity of 4,500-000 gallons.—*Fire and Water.*

BOOKS AND PERIODICALS

DYMANO ELECTRIC MACHINERY by Carl Mac Fadden and William D. Ray—has been published in Chicago by Laird & Lee. This handy volume is illustrated; a likeness of Thomas A. Edison shows a face of wonderful determination. Price one dollar, this is a book that should go into the hands of every one interested in this fast growing business that is daily increasing in importance.

LEND A HAND for October, published in Boston by J. Stillman Smith & Co., is an unusual interesting member, the leading article "The Progress of the Century" by Rev. Edward E. Hale will well repay a careful study, coming at this time when the author has suffered the last of a cherished and promising son just entering upon what promised to be a useful life. Anything from the pen of such a father must be read with interest.

The "Tenement House Question" by Margaret Bradshaw is also an article that will call carefull attention to this much vexed question and gives much information that will be of great service to those who wish to attempt the improvement of the Tenement House.

A valuable little work on the practical application of

THE NEW SCIENCE REVIEW for October, 1895.—This able review is always welcome because we suppose that it always contains some articles that set the reader a thinking, and asking the question can this be so.

"Apergy" Power without cost by Charles Morris; this writer claims that John Ernest Worrell Keely, the inventor of the notable "Keely Motor" has nearly made a useful invention or discovered a new farce.

John Jacob Astor in his romance called "A Journey in Other Worlds" makes use of this power called "Apery" to propel his vessel to unknown regions in the upper air.

The article on "Vivisection" shows conclusively that no gain to science has ever been gained by this cruel practice and that its sole result has been the brutalizing of the medical student and physician into those abnormal beings which are frequently met with amongst those who indulge in this horrible pastime.

THE ARCHITECTS' DIRECTORY.—"The Architects' Directory" for 1895-96, containing a list of the architects in the United States and Canada, classiged by States and towns, giving the architectural associations to which they belong, has the publisher states, been prepared with great care to secure accuracy of both name and location. It is published by Wm. T. Comstock, 23 Warren street, New York, bound in red boards, gilt title, 16mo. price $1.00.

In comparing this directory with the last year's issue a great multitude of cparges are noticeable. The effect of the last two years of dull business have had a marked effect on the profession of architecture. In the West especially, the change has been great; many towns that had several architects, to-day are unrepresented. Lack of business has compelled practitioners to seek other fields or different lines of employment. The list, by the many changes made, shows careful revision and an earnest effort to obtain the utmost accuracy. Any one who has had the least experience in preparing an accurate list of any calling must see how much effort it is to secure it. A reference to these pages will show that carefull work has been done in this case, and we feel that both architects and material men will appreciate the efforts made to secure a correct list of architects.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

MECHANICS' LIEN CANNOT BE APPLIED TO SCHOOL PROPERTY.—The right to a mechanics' lien has no existence, except by virtue of the statute. While a liberal construction should be given to its provisions, to the end that the purposes of its enactment may not be defeated, still its scope cannot be enlarged by attaching to the language employed a forced or unusual meaning. The rights and remedies of a sub-contractor are to a certain extent, measured by those of the original contractor. The foundation of the right of either to a lien is the original contract, and if that is not such as the statute contemplates, and cannot therefore, be made the basis of a lien in favor of the original contractor, a contractor under him is entitled to none. The original contract must be made with the owner of the land upon which the building is erected, or with some person authorized to act for him, and the resultant lien is co-extensive with his interest or claim in the property. An owner is one who has dominion over that which is the subject of the ownership. He has the right to make such use of it, consistent with the right of others, as he may see fit. The ownership may extend to the entire thing, or may be limited to an interest in it; but whatever is the subject of the ownership, it is held by the owner for his own individual benefit. For the purposes of the act, as assignable, transferable, or conveyable interest or claim in the thing constitutes ownership, but the right to assign, transfer, or convey resides in the person having the interest or claim, to be exercised at his pleasure, so that his relation to the interest or claim is that of "owner" under the general definition of the term. By the terms of the statute all school property within the district is held by the school board in trust for the school district, for the benefit of the school, and the school is a state institution. We do not think that either the school board or the school district is, within any definition of the term the "owner" of the school property; and, the provisions of the mechanics' lien law cannot be applied to public school buildings. But it does not follow that the lienor is without remedy. He has recovered a judgment against his immediate contractors. A school district is a quasi corporation, and not subject to process in garnishment; but if the board has money in its hands belonging to the contractors, and the lienor is unable to realize anything upon his judgment, the money can be reached by a proceeding in equity. A court of chancery will subject property and funds to the satisfaction of a judgment, when they cannot be reached by legal process, and the judgment cannot otherwise be satisfied.

Florman v. School Dist. No. 11 El Paso County, Court of Appeals of Colorado, 40 Pac. Rep. 469.

APPLICATION OF PAYMENT.—A contractor received money from one W., for whom he was building a house, and paid it to a material man, who had filed a lien against the house, and to whom the contractor was indebted on several accounts. At the time of

making the payment the contractor stated that he received the money from W., and that "I gave it to you on account." The material man applied it to an account other than that for materials furnished for W's house. It was held, that a claimant who had filed a subsequent lien against such house was not entitled to have the payment applied to the account for the materials furnished for W's house, merely because the money came from the owner.

Orr v. Nagle, Supreme Court, General Term, Second Department, 33 N. Y. Sup. Rep. 879.

A Contractor who has Abandoned Work.—A contractor who has abandoned work for which he contracted cannot recover on a quantum meruit for the part done by him unless the contract was rescinded, or its complete performance was rendered impossible by the wrongful conduct of the owner. The fact that the owner upon the statement of the contractor that his failure to prosecute the work was owing to his inability to get mechanics, employed extra men himself, does not show a recission of the contract by the owner nor cause for recission by the contractor.

McGonigle v. Klein, Court of Appeals of Colorado, 10 Pac. Rep. 465.

Performance of Contract.—A contract to put a gravel roof on a building, to be done in first class shape, and guaranteed for a certain time, does not require the personal services of the contractor, so as to prevent his hiring another to do it under his supervision and instruction.

Curran v. Clifford, Court of Appeals of Colorado, 10 Pac. Rep. 477.

To Recover for Work Done Under Contract.—In an action to recover for work done under a contract, and for breach of the contract by the owner in preventing further performance, a report made to the contractor by his workmen that they had been stopped by the owner, accompanied by proof that they had been stopped by him, is competent to show the reason why the contractor ceased further performance of the contract.

Raven v. Smith, Supreme Court, General Term, Second Department, 33 N. Y. Sup. Rep. 972.

Restrictions in Deed.—A restriction in a deed "that no building shall be placed at a less distance than twenty feet from the easterly line of the street" is violated by the erection, within the prohibited distance, of a piazza, eight feet wide, encircled by a railing, and having a roof supported by posts, attached to a house, and extending along its entire front.

Reardon v. Murphy, Supreme Judicial Court of Massachusetts, 10 N. E. Rep. 854.

In an Action on a Note.—In an action on a note given by the owner of a building for materials furnished the contractor, in the absence of any warranty exacted from the material man when the note was given or other contract in regard to the materials, the Supreme court of Michigan holds, that the owner cannot recoup damages on the ground that the material furnished did not come up to the specifications in the building contract.

Delbridge, Brooks & Fisher Co. v. Patterson, 63 N. W. Rep. 436.

BUSINESS MOSAICS.

TYPEWRITING.—Save time and labor by dictating your contracts, specifications, etc., in shorthand to our stenographers free of charge. Sent to all parts of the city. Typewriting only five cents per folio of one hundred words. Additional copies two cents per folio. Pacific Copying Co., 10 Murphy Building, Telephone Jessie, 31.

Mrs. Moriarity—"Oh, Moike, Moike, can't you spake to me?" Mr. Moriarity—"It's dead I am, darlint. I'm kilt entirely." Mrs. Moriarity—"And it's right glad I am to hear you say that same."—*Terre Haute Express.*

Joseph Budde manufacturer of sanitary appliances in the plumbing line, furnishes everything in this line that can be required to make our residences healthy and convenient; it will be well to remember in giving orders to Mr. Budde that you are patronizing home industry, and at the same time getting what you want of the most improved kind, at reasonable prices. His factory and show room is at 575 Mission street, San Francisco.

Harriet—"Let's play cleaning house, will you Henry?" Henry—"All right; you pound your fingers with the tack hammer, and I'll up set the stove pipe and say dammit."—*Society.*

A. Steiger Sons manufacturers of Architectural Terra Cotta, and almost everything in the way of stoneware, etc., have their San Francisco office at 320 Sansome street, San Francisco, San Jose address P. O. Box 1025.

Building Paper and Paraffine Paint are almost indispensible now days in making a house comfortable and lasting; you have an opportunity to patronize home industry, and add to your comfort at the same time by calling at 116 Battery street and leaving your orders.

"What were your husband's last words?" "He hadn't any," sobbed the widow, "I was with him."—*N. Y. Sun.*

Edward B. Hinds & Co., 411 Mission street, San Francisco continue to furnish Hill's Patent Inside Sliding Blinds, Perfection Window Screens, Self Coiling Burglar and fire-proof steel shutters, as well as rolling wood partitions. Send for catalogue and price list.

Mr. de Style—"Let's go to the theatre to-night." Mrs. de Style—"I have nothing to ware." Mr. de Style—"Then let's go to the opera."—*New York Weekly.*

If you want the most complete and safest patent chimney in the market get Clawson's at 1340 Market street, San Francisco.

"Was Washington a polished writer?" "Well, he used to knock the King's English silly."—*Life.*

Messrs. N. & G. Taylor Co., manufacturers of the "Taylor Old Style" brand of Roofing Tin, Philadelphia, are out in a neat advertisement. It is a four-leaf folder, on heavy paper, printed in two colors in attractive type. It is entitled "A Roofing Tin That Will Last as Long as the

Building." They also devote a page to the "Secret in the Tinplate Trade," and go on to say that "The Secrets" in the Tinplate trade are in the producing of plates that appear other than what they are. The circular also states that their special brand "The Taylor Old Style," is the only plate made to-day exactly the same as in 1830, since which time it has never caused a complaint." To those interested in good Roofing Tin, we would suggest that they write to the N. & G. Taylor Co., Philadelphia, and secure samples and prices. This firm has always enjoyed the reputation of handling the best of goods.

His Piece—She—"I didn't hear anything of father's dog. He held his peace to-night, didn't he?" He (bitterly) "Yes; his piece of my $15 trowsers."—*Yale Record.*

Any of our readers interested in building a comfortable residence, should not fail to visit the show-room of the J. L. Mott Iron Works under the charge of Mr. M. S. James who is the Coast representative of the company.

To those not already posted it will prove a revelation to find what a fine display of goods that may well be called luxurious, every thing in the line of baths, wash tubs, foot baths, etc., with the latest improvements in the way of fitting will be found.

No excuse can be made for not having our houses properly provided for in this line, when we have on hand such a choice selection to choose from. Office and show rooms 27 Flood Building, third floor.

Clause Spreckels proposes to build a house out of sugar. That's nothing. We know a dairyman in Ohio who built several houses out of chalk and water.—*Toledo Bee.*

When a man decides upon improving his shop, factory or farm, by the addition of power, he naturally looks for something entirely up to date. He investigates, considers, and finally decides to buy an Ajax Coal Oil Gas Engine as meeting his requirements more fully, and being safer, than any other power obtainable. Palmer and Ray, San Francisco, Cal., the manufacturers of this engine, have earned the gratitude of the public by placing within its reach a reliable, economical power, that defies the restrictions of insurance companies. It is the latest and best.

Girl (weeping)—"I'm sorry you have to go on the road again. It almost breaks my heart." Drummer—"Don't cry, Fanny, I'll manage to pick up another girl somewhere."—*New Letter.*

William Bateman manufacturer of wood mantels, interior finish and inlaid floors. Mr. Bateman gives particular attention to fitting up banks, offices, stores and steamboats, 411 Mission street between First and Fremont streets.

Cabot's Creosote Shingle Stains.—Since the introduction of these stains manufactured by Mr. Samuel Cabot, 70 Kilby street, Boston, there has been great improvement in the looks of those houses that have what may be called an unrivaled article for the permanent improvement of the looks, as well as the lasting qualities, for by the use of this stain you do not require to repaint your building so often as is the case where the stain has not been used. Bell & Van Wyck are the agents of Samuel Cabot, their office is at 303 California street, San Francisco.

Briggs—"Sometimes I wish I could be a hermit, and not have to associate with my fellow men." Braggs—"You can get practically the same effect by eating onions."—*News Letter.*

Those in want of artificial stone work, would do well to call upon George Goodman, who makes a good sidewalk as well as every thing else in his line of business, his office is in the Nevada Block, 307 Montgomery street, San Francisco.

CITY BUILDING NEWS.

Austin street No. 420. Additions; contractor, Aug. Lund; house raising, A. T. Penebsky; cost $1000.

Austin and Gough. Two-story frame; owner, Mrs. M. O'Brien; architect, Herman & Swain; contractor, J. J. O'Brien; signed, Oct. 5; filed, Oct. 5; cost $3640.

Belvedere near Waller. Cottage; owner, E. J. Malmgren; architect, A. Stenbiht; contractor, W. W. Rednell; signed, Sept. 18; filed, Sept. 18; cost $1900.

Broadway and Buchanan. Plastering three-story frame; owner, Mrs. Annie Donahue; architect, A. Page Brown; contractor, Henry Fisher; signed, Sept. 20; filed, Sept. 30; cost $2900.

Broadway near Webster. Plumbing, sewers, etc.; owner, W. H. Diamond; architects, Polk & Polk; contractor, E. J. Duffey; signed, Sept. 18; filed, Sept. 30; cost $1787.

Brannan near 4th. Two-story frame; owner, R. Herring; day's work; cost $1500.

Brannan and 6th. One-story frame; owner, D. Gallagher; contractors, Hood & Watson; cost $1000.

Brannan and 5th. Sheds; owners, Scott & Van Arsdale; cost $1000.

Buchanan near Turk. Two-story frame except painting and plumbing, etc.; owner, Mrs. Meta Ecks; architect, Emil John; contractor, C. Schutt; signed, Sept. 10; filed, Sept. 12; cost $5860.

Bush and Baker. Two-story frame; owners, Emil and Julia Barth; architects, Kenitzer & Barth; contractor, Adam Miller; signed, Sept. 11; filed, Sept. 14; cost $1300.

California near Mason. Specification filed; owner, Elizabeth J. Fricot, architect, Emile Depierre; contractor, H. Williamson; signed, Sept. 12; filed, Sept. 18; cost $1288.

California and Taylor. Repairs to building; owner, Alfred Tobin; day's work; cost $3000.

Clement near 5th Ave. Two-story frame; owner, C. Mohrmann; architect, W. H. Armitage; contractor, L. B. Schmid; signed, Sept. 20; filed, Sept. 26; cost $2594.

Clara and Fifth. Additions, etc.; owner, Mrs. Sullivan; contractor, H. Brown; cost $1200.

Devisadero and Post. Three-story frame; owner, John W. McDonald; architects, Havens & Toepke; day's work; cost $18,000.

Eighteenth and Folsom. Frame building; owners, Townley Bros.; day's work; cost $1000.

Fell near Clayton. Two-story frame; owner, F. T. Green; contractor, D. Einstein; signed, Sept. 11; filed, Sept. 14; cost $2750.

Fourth and Freelon. Three-story frame except painting, plumbing and plastering; owner, Adolph Schneider; architect, Emile Depierre; contractor, F. V. Acker; signed, Sept. 10; filed, Sept. 12; cost $4550.

Fourth near Brannan. Two-story frame; owner, Robert Watt, trustee; architects, Percy & Hamilton; contractor, D. B. Munroe; signed, Sept. 21; filed, Sept. 25, cost $6400.

Fourth and Welsh. Two-story frame; owner, John Barry; architect, R. H. White; contractor, Donald Currie; signed, Sept. 27; filed, Oct. 1; cost $6900.

Folsom near 25th. Two-story frame; owners, Geo. and Sophie Buecker; architect, L. C. Behrens; contractor, H. P. Conrady; signed, Sept. 21; filed, Sept. 21; cost $3800.

Freelon near 4th. Two-story frame; owner, Ann Keyes; architect, M. J. Welsh; contractor, M. C. Lynch; signed, Sept. 11; filed, Sept. 12; cost $5100.

Freelon near 4th. Two-story frame; owner, James Reavey; architects, Townsend & Wyneken; contractors, Peterson & Olson; signed, Sept. 19; filed, Sept. 20; cost $2600.

Freelon near 4th. Two-story frame; owner, John S. Thompson; architect, A. J. Barnett; contractors, Ogle & Smith; signed, Sept. 24; filed, Sept. 25; cost $1950.

Filbert near Webster. Repairs to Engine House 20; owner, City of San Francisco; contractor, J. T. Hayes; cost $365.

Fulton near Octavia. Alterations and additions; owner, John H. McMenomy; architects, Laver & Mullany; contractor, J. W. Fish; signed, Sept. 14; filed, Sept. 14; cost $2030.

Fulton near Pierce. Two-story frame to build except painting and plumbing; owner, Wm. McCormick; architect, A. J. Barnett; contractors, Ogle & Smith; signed, Sept 24; filed, Sept. 25; cost $3824.

Fulton near Pierce. Painting and plumbing; owner, Wm. McCormick; architect, A. J. Barnett; contractors, Ogle & Smith; cost $6666.

Grove near Buchanan. Plumbing and gas fitting work; owner, Jacob Dewzler; architects, Kenitzer & Barth; contractor, H. Williamson; signed, Sept. 20 filed, Sept. 26; cost $750.

Haight near Masonic. Carpenter work on schoolhouse; owner, City of San Francisco; architect, T. J. Welsh; contractors, Hanchrough Bros.; signed, Sept. 14; cost $15,395.

Haight near Masonic Ave. Concrete work; owner, City of San Francisco; architect, T. J. Welsh; contractors, Gray Bros; cost $1888. Plumbing contractor, E. Hogan; cost $2300. Galvanized Iron Work; contractor, Forderer Cornice Works; cost $ 076. Painting; contractor, D. Zelinsky; cost $1575.

Haight, Waller, Cole and Clayton. Concrete and asphalt work as a reservoir; owner, Paul Boynton Chute Co.; manager, W. H. McNaughton; contractor, Western Improvement Co.; cost ten cents per sq. foot for actual surface covered.

Jackson near Larkin. Two-story frame; owner, Catherine M. Mathews; architects, Shea & Shea; contractor, R. Trost, signed, Sept. 10; filed, Sept. 17; cost $1181.

Jackson near Walnut. Two-story frame; owner, Mary Gallway; architect, J. E. Krafft; contractor, J. Bucher; signed, Sept. 19, filed, Sept. 23; cost $2920.

Jessie near 15th. Two-story frame; owners, Patrick and Ellen Clark; contractor, G. Ratto; signed, Sept. 10, filed, Sept. 11; cost $1600.

Jessie near 14th. Two-story frame; owner, Cornelius Denehy; contractor, C. Anderson; signed, Sept. 19; filed, Sept. 19; cost $2155.

Laurel near Sacramento. Two-story frame; owner, Clara J. Burtchaell; contractor, G. A. Nagel; signed, Sept. 24; filed, Sept. 24; cost $3300.

Lombard near Powell. Three-story frame; owner, Hugh McKevitt; architect, M. J. Welsh; cost $4000.

Lombard near Powell. Three-story frame; owner, Hugh McKevitt; architect, M. J. Welsh; contractor, Donald Currie; signed, Oct. 5; filed, Oct. 8; cost $4400.

Market near Stockton. Sidewalk improvements; owner, W. Eads; concrete work, Geo. Goodman; cost $1800.

Market street No. 836. Alterations; owner, B. Lucke; contractors, Ackerson & Paterson; cost $1500.

Market near Fifth. Encaustic Tile work; owner, Mrs. A. M. Parrott; architect, Pissis & Moore; contractor, T. F. Rigney; cost $7,500.

Market and 3d. Excavations; owner, Claus Spreckles; architects, Reid Bros.; contractor, A. E. Buckman; signed, Sept. 21; filed, Sept. 27; cost thirty-seven cents per cubic feet.

Market and 3d. Concrete work for foundation; owner, Claus Spreckles; architects, Reid Bros.; contractors, Gray Bros.; signed, Sept. 21; filed, Sept. 21; cost $3,500.

Market and Powell. Additions and alterations; owner, E. J. Baldwin; architect, M. J. Lyon; cost $25,000.

Masonic Ave. and Haight. Eight two-story frame dwellings; owners, architects and builders, Cranston & Keenan; cost $40,000.

Mason near Geary. Elevator work; owners, N. S. G. W.; architect, A. C. Lutgens; contractors, Cahill & Hall; signed, Sept. 5; filed, Sept. 14, cost $2775.

McAllister near Masonic Ave. Two-story frame; owner, James Pedlina; contractor, J. J. Manseau; signed, Sept. 25; filed, Sept. 30; cost $3000.

McAllister near Buchanan. Repairs to Engine house; owner, City of San Francisco; architect, C. R. Wilson; contractor, W. H. Wickersham; cost $1916.

Mission near Onondago. Additions; owner, Mr. Cordes; house mover, A. T. Penebsky; day's work; cost $1000.

Mission near Onondago. Additions; owner, Mr. Towrane; day's work; cost $1200.

Mission near 23d. Alterations and additions, owner, Nils Thompson; architect, M. J. Welsh; contractors, Dean & Son; signed, Sept. 17; filed, Sept. 19; cost $2296.

Mission near 20th. Additional story; owner, E. R. Lawson; architect, A. C. Lutgens; day,s work; cost $4000.

Mission near 3d. Two water tight pits; owner, T. T. Williams; architect, A. C. Schweinfurth; contractor, Geo. Goodman; signed, Sept. 17; filed, Sept. 20; cost $1524.

Mission and Ridley. Additional story; owner, Patrick Casey; contractor, James Maguire; signed, Oct. 2; filed, Oct. 2; cost $1350.

Nineteenth and Collinwood. Two-story frame; owner, John Vielmauer; contractor, F. V. Steinmann; signed, Sept. 17; filed, Sept. 21; cost $3,000.

Nineteenth and Diamond. Three-story frame; owner, Matilda E. Moore; contractor, T. C. Cockrane; signed, Oct. 5; filed, Oct. 5; cost $4820.

Noe near Henry. Alterations; owner, A. C. Biebee; contractor, Chas. Koenig; signed, Sept. 12; filed, Sept. 14; cost $1,000.

Noe near 19th. Additions; owner, Mr. Quinn; house moving; A. T. Penebsky; cost $1000.

O'Farrell near Stockton. Repairs to Truck House; owner, City of San Francisco; contractor, W. H. Wickersham; cost $973.

P street near 13th. Additions and alterations; owner, Denis O'Leary; architect, C. Winstanley; contractor, F. Bohenberg; signed, Oct. 2; filed, Oct. 3; cost $3160.

Palace Hotel. Additions and alterations; owners, estate of Wm. Sharon; carpenter work; contractor, W. J. Grant. Plastering; contractor, D. J. Mulville. Iron work; contractor, Ralston Iron Works. Cost about $12,000. Painting additional.

Page near Stanyan. Plumbing work; owner, Dr. Salfield; architect, B. E. Henricksen; contractor, G. C. Sweeney; cost $1000.

Pennsylvania Ave. near 18th. Two-story frame; owners, David and Mary Kannitz; architect, D. C. Coleman; contractor, James Glackin, signed, Sept. 26; filed, Sept. 28; cost $2860.

Sacramento and Spruce. Two-story frame; owner, Annie O'Connor; architect, H. Hess; contractors, Spellman & Son, signed, Sept. 25; filed, Sept. 30; cost $2695.

Sacramento near Webster. Two three-story frames; owner, Jacob Rosenberg; architects, McDougall & Son; day's work; cost $33,000.

Sacramento near Webster. Lathing and plastering; owner, Jacob Rosenberg; architects, McDougall & Son; contractor, Jas. Kerlin; signed, Oct. 4; filed, Oct. 4; cost $1600.

Sacramento near Webster. Mill work; owner, Jacob Rosenberg; architects McDougall & Son; contractors, McFarland Bros; signed, Sept. 3; filed, Oct 4; cost $1400.

Sacramento near Webster. Plumbing, etc.; owner, Jacob Rosenberg; contractors, Walsh & McCluskey; signed, Sept. 19; filed, Sept. 30; cost $1706.

Shotwell near 24th. Two-story frame; owner, Mrs. Mary P. Warnock; contractor, C. T. Simmons; signed, Oct. 3; filed, Oct. 3; cost $3800.

Shotwell near 18th. Too frame cottages; owner, T. A. Brown; cost $3200.

Shotwell and 26th. Additional contracts; owners, J. H. and C. Bultmann; architects, Herman & Swain. Mason work; contractor, D. J. Brennan; cost $945. Painting; contractor, G. A. Patterson; cost $400. Plumbing; contractors, Ickelheimer & Bro.; cost $615. Electrical work; cost $200. Mantels and gas fixtures; cost $500. Store fixtures; cost $750.

Silver near 3d. Three flats; owner, Bridget Kane; contractor, A. Klahn; signed, Oct. 3; filed, Oct. 4; cost $1678.

Stanyan near 18th. Frame dwelling; owner Elsie A. wife of Jos. Mader; contractor, W. W. Redinall; signed, Sept. 12; filed, Sept. 13; cost $2150.

Sutter and Jones. Plumbing and sewers; owner, Dr. M. Herzstein; architect, M. J. Lyon; contractors, Ickelheimer & Bro.; signed, Aug. 29; filed, Sept. 21; cost $3500.

Sutter and Jones. Heating and ventilation; owner, Dr. M. Herzstein; architect, M. J. Lyon; contractor, Wm. Croman; signed, Sept. 18; filed, Sept. 21; cost $5795.

Sutter and Jones. Two electric elevators; owner, Dr. M. Herzstein; architect, M. J. Lyons; contractor, W. L. Holman; signed, Sept. 2; filed, Sept. 21; cost $4000.

Sutter and Jones. Electric work; owner, Dr. M. Herzstein; architect, M. J. Lyons; contractor, J. H. Wolf; signed, Aug. 30; filed, Oct. 5; cost $1350.

Tennessee near Napa. Repairs to Engineer house 13; owner, City of San Francisco; contractor, A. McElroy; cost $1869.

Tremont Ave. near Waller. Two-story frame; owners, Walter and Matilda White; contractors, White Bros.; signed, Sept. 18; filed, Sept. 21; cost $3750.

Third Ave. near Lake. Two-story frame; owner, Frank T. Hart; architect, A. J. Barnett, contractor, Jas. Cochran; signed, Sept. 19; filed, Sept. 26; cost $2625.

Twenty-first near York. Frame cottage; owner and builder, A. Olson.

Twenty-second near Tennessee. Two-story frame; owner, Wilhelm Beckmann; contractor, T. C. Cochrane; signed, Sept. 10; filed, Sept. 12; cost $2628.

Twenty-third near Douglass. Frame cottage; owner, Pat. Garthland; contractor, J. McConahey; signed, Sept. 21; filed, Sept. 23; cost $1325.

Twenty-third near Hoffman Ave. Frame cottage; owner, W. S. Foss; contractor, J. Heyman; cost $2000.

Waller near Masonic Ave. Frame cottage; owner, C. F. Blank; contractor, J. Stierlein; signed, Sept. 30; filed, Sept. 30; cost $2100.

Water Front. Storehouse for Harbor Commissioners; contractors, Haley, Tibbetts & Co.; cost $1393.

DUNHAM, CARRIGAN & HAYDEN CO.

17 and 19 BEALE ST., San Francisco Cal.

WE show here an illustration of our **AMERICAN SLIDING DOOR HANGER** for which we claim unusual advantages, great saving in time and expense, and superior excellence in operation, together with the following features not obtained or claimed in other hangers.

TRACKLESS—We obviate the use of a track above or below, and the special framing necessary where a track is used.

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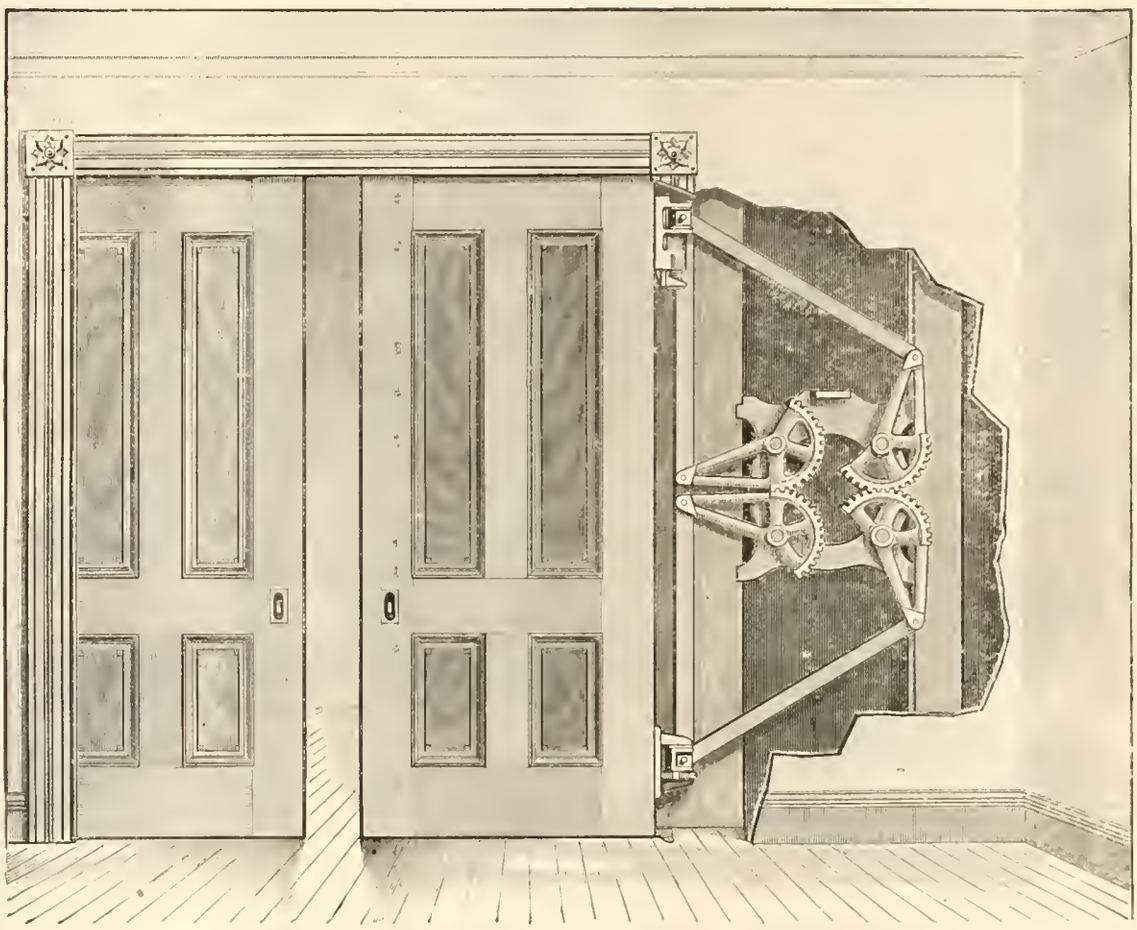

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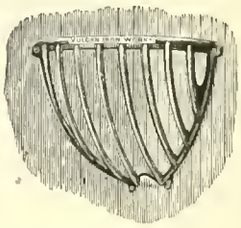

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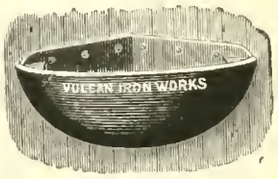

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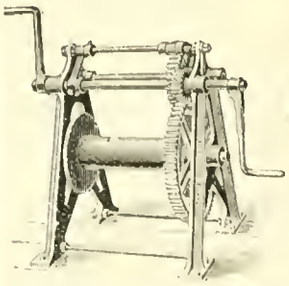

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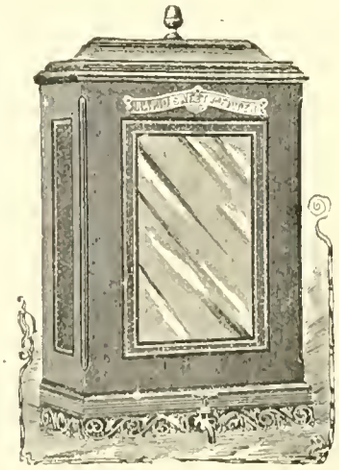

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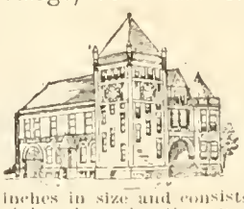

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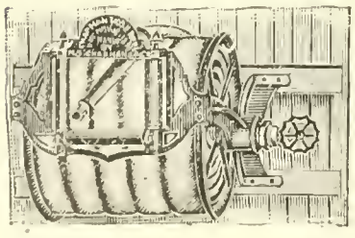

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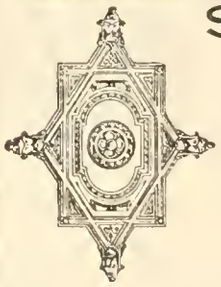

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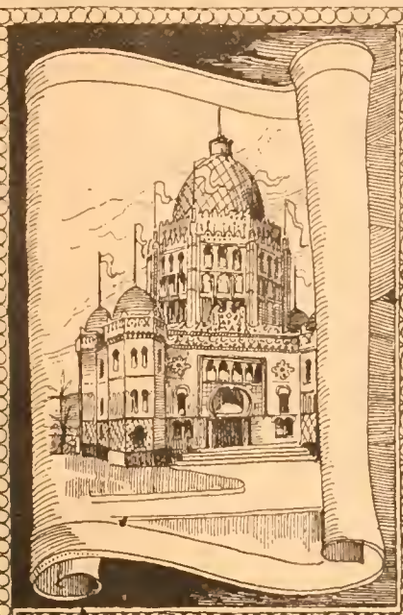

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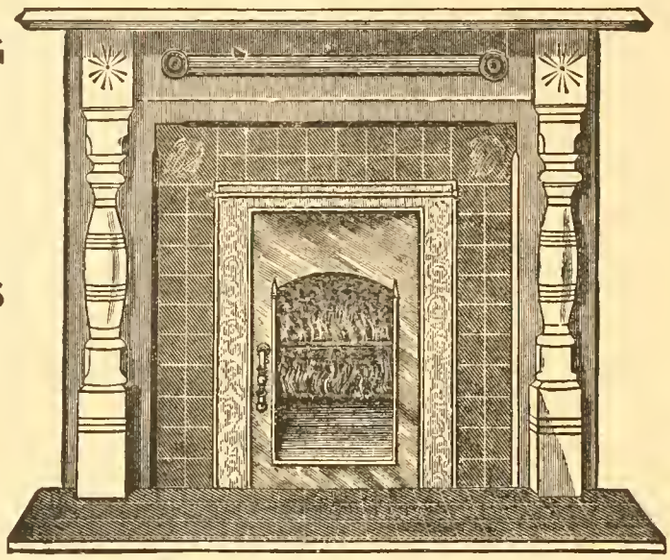

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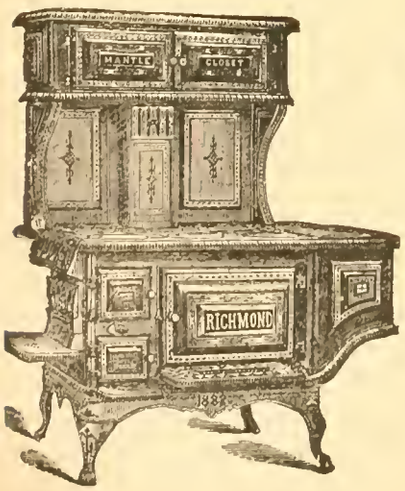

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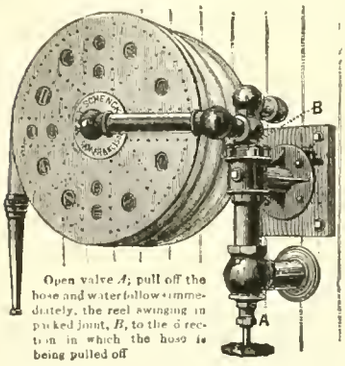

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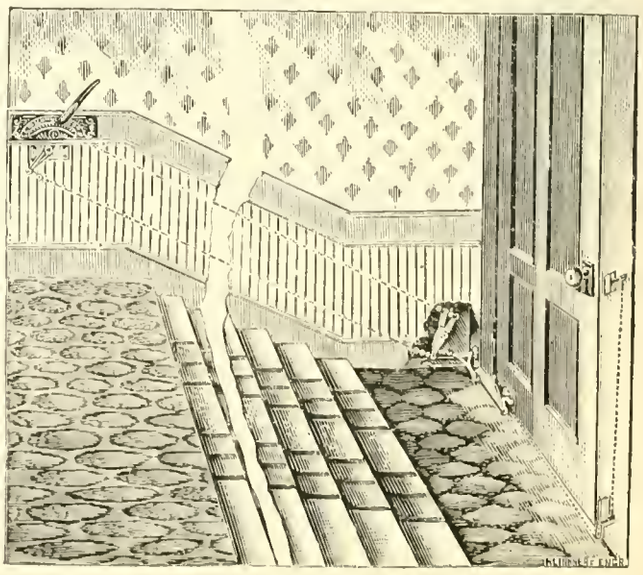

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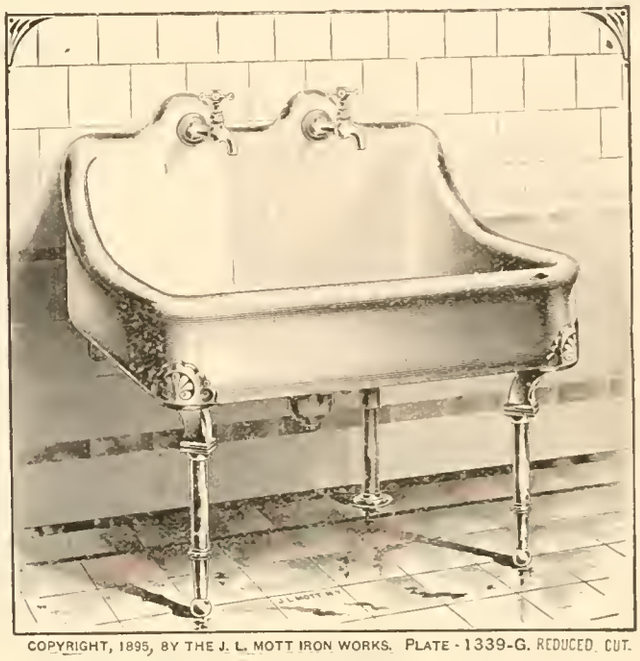

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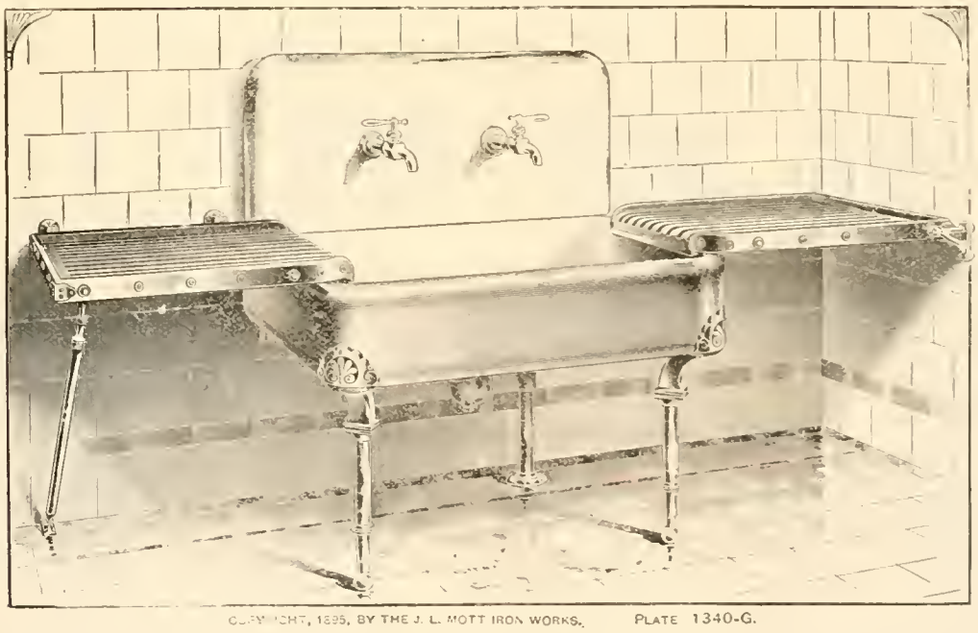

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PLATE 1340 G. shows the Imperial Porcelain Sink with an Imperial Porcelain Back instead of Marble, fitted up same as Plate 1339 G. but with Drain Board. This Drain Board patent applied for is an important adjust to a Kitchen Sink, and is specially devised for use with Roll Rim Sinks and fulfils all practical and sanitary requirements. It is entirely free from the wall, one end being supported by the Sink and the other by Cast Brass Brackets or a leg. The corner Drain Board of Plate 1340 G. swings on the hinges shown at the right. The end Drain Board swings on the hinges at back, the supporting leg being telescopic and folding as the Board is raised so that the Board can be swung up out of the way when it is desired to clean the wall. The Board is made of selected Ash the pieces being tongued and grooved and with rod passing through to insure non-warping. The rim along the three sides of the board prevents dishes falling off, also water from dropping to the floor.

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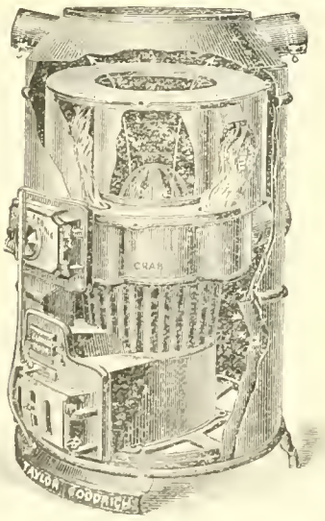

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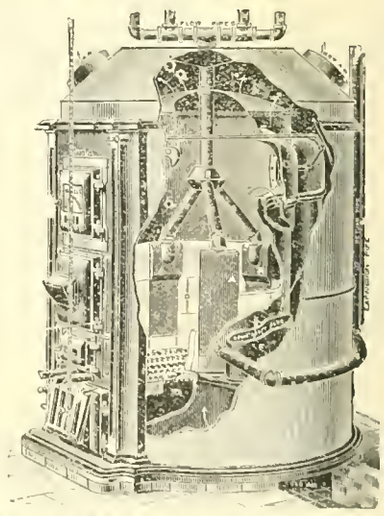

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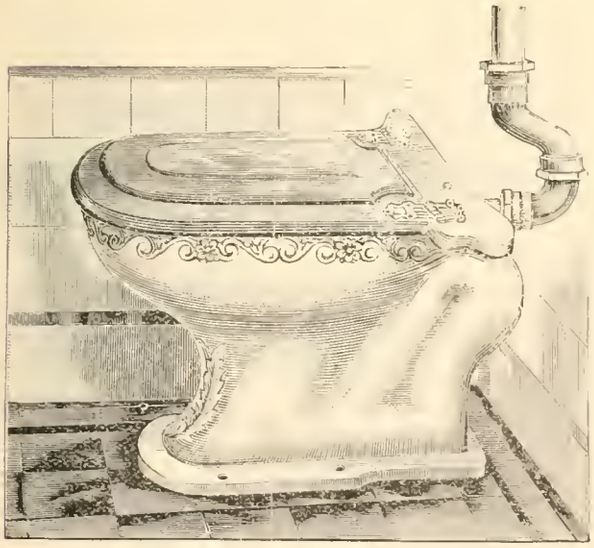

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PEOPLE of the civilized world, who have the good of humanity at heart, are to-day earnstly engaged in studying the present condition of society with refererence to its probable effect on the future of civilization. It is admitted on ever side, that the existing condition of things could be improved on, and the pessamist thinks that if it is not improved on soon, that an industrialy revolution will surely result.

Every legislative body from town council to national senate is engaged in futile endeavors to so improve our laws that greater benefits may be conferred on a larger proportion of the public. At least that is what a long suffering public is supposed to believe. As a matter of fact, every legislative body, from Supervisors to Senators, is engaged in passing laws, giving special privileges to special classes. Corporations are granted control of our streets for railroads, gas and water and electric light purposes, etc., etc., while an astonishing mass of evidence is at hand to show the benefit that would result to the community, if public instead of private corporations should own and conduct these public utilities. Even the daily press occasionally publishes some of these striking facts, but is usually too timid to strongly advocate a sweeping reform. The old parties in national politics are still tinkering away at the rotten and corrupt legislation that has resulted from the election of petty politicians instead of broad and liberal statesmen; a legislation that surrenders the public money to private ownership, and even goes so far as to give to private banks the right that the Constitution of our United States refused to confide to any hands, save the national government alone.

As a small and local example of the influence of private interests acting against public policy, we can cite the attempts made in recent years to get proper building ordinances for the city of San Francisco.

The Fire Department has had the matter in hand for years. After much study and many consultations with the local Chapter of Architects, an ordinance was framed. We do not know that it is any secret, that private interests kept it from being acted on by the Supervisors for many month's. It is certainly no secret that private interests have prevented its becoming law. Now, in view of the fact, that private interests do as a matter of fact, direct, control and defeat beneficial legislation, is it any wonder that pessamists look with despondency on the future? That socialism is looked to by many as the only escape from present crushing conditions? And that reform parties are springing up on every side, each with new remedies to propose?

CITY HALL ENVIRONS.

AS an attempt will be made next legislature to permit the City to regain possession of its birthright, wrung from it during the first years of the building of its City Hall—that ground forming part of the old Yerba Buena graveyard lying between the City Hall and Market street—some practical way must be devised by which the City may now recoup itself for the prospective millions of dollars it threw away at that time, and which it will now have to pay to take possession again of the land.

If the present owners are allowed to build on these lots comprising this land the buildings 130 feet high—which there is no equitable way to prevent except by buying the property—the view of the whole south front of the Hall will be cut off except the little visible at the end of City Hall Square.

The *tout ensemble* or the altogether of the front will thus be nevermore seen of mortal man. This result looking at it from an artistic view is a result devoutly to be contemned. Therefore if there be any way by which the City Hall may yet be seen in its entirety and still the land facing on Market street be utilized; such a way is worthy of consideration and action.

Now an objection has always been made by business people that a break made in a business street by a park or recreation grounds, spoils the continuity of the line of stores and thus tends to prevent the side of the street on which this is from being favored as a shopping side. This may be so—and if so the solution of the question about to be offered does away with this objection.

The proposition is that the City acquire the whole of the property between the City Hall and Market street down to the corner of McAllister and build thereon a one-story market building covering the whole ground with a glass roof. In this building can be housed, as many businesses as may be desirable—chiefly however would be those catering to the wants of the citizens in the eating line—butchers, greengrocers, fruiterers, fishmongers, dairy produce, etc., and restaurants. These businesses are always desirable for obvious reasons to be kept by themselves and to have no dwelling place over them.

This crystal palace devoted to the Art and Science of Gastronomy will be a striking feature to the City and at the same time will not prevent the whole effect of the City Hall from being taken in from the opposite side of Market street.

Now as to the financial part of the scheme whatever money necessary to be raised to pay for the land and for the erection of the building will be secured by the rents—the amount of which rents will be found amply sufficient to pay three per cent on the bonds, and at the same time no doubt provide a balance to help pay off the principal; with the satisfaction of knowing that at the end of that time a permanent income will be coming into the City.

W. J. CUTHBERTSON.

"Say, mamma, it's awful hard work fishin', ain't it?" "No, dear." "Then why does papa always have to stay in bed the next day and rest?"—*Truth.*

FOR RIGID BUILDING INSPECTION.

REAL estate men, especially the large and influential class that develops property by building, are more interested in investigations of recent collapses of unfinished buildings than would appear on the surface. The real estate board has on more than one occasion taken a decided stand in favor of licensing architects in a similar manner as members of the legal and medical professions must be licensed before they are permitted to practice. At present there are hundreds of contractors and builders, practical men perhaps, but no architects, who are permitted by the building department to erect, not only frame cottages, but quite pretentious flats and store buildings, upon the presentation of mere excuses for building plans. Frequently only the most primitive sketches are accepted, and the result must naturally be that many insecure buildings are erected.

In this connection, and referring to recent collapses of unfinished buildings in Chicago and New York, the *American Contractor* says that two things at least can be done, which, if they will not render future similar occurrences impossible, will at least make them highly improbable.

First, every city should have building inspectors who inspect. And the first requisite in securing such officers is that their appointment shall be absolutely taken out of the hands of the political machine. To make such a position as it now is, one of the spoils of office, says the paper cited, is as rediculous as it would be to have the office of schoolteacher dependent upon party reward for party influence. No, the building inspector, whose duty it is to see that every building in course of erection is built in full accordance with the ordinances regulating such matters, should be appointed by the executive for his experience and fitness for the office—appointed with the consent of the legislative branch, and when appointed hold his office as does the supreme judge, during life, or until he proves unworthy, and he should be subject only to the law.

* * *

Then, too, the law should throw its protecting barriers about the noble profession of architecture. Architects should be licensed, and no one allowed to design buildings unless he had previously shown to the satisfaction of the state that he thoroughly understands how to calculate strains and knows the strength of building materials.

In most States a doctor who has not thoroughly qualified himself by a course of study in some recognized college is not allowed to practice medicine. And, likewise, no architect should be permitted to design and superintend the erection of high buildings unless he had first qualified himself by a suitable course of study. A mere draughtsman or a carpenter who has made a study of attractive elevations is frequently developed into a full-fledged architect with an abundant line of clients. To diminish the risks to the public by restricting the work of such men of "a little education" is a curtailment of license and not of liberty.

When towns were small and one and two story buildings were the prevailing style it mattered little, but with growth of cities and the almost universal demand for taller buildings—for heavy warehouses of eight and ten stories; for flat buildings of six, seven, eight, or even ten and twelve stories, accommodating scores of families—the needs and responsibilities are multiplied, the attendant dangers quadrupled, and the necessity for public supervision and protec-

tion becomes imperative. With the planning of all such buildings exclusively in the hands of competent architects, responsible for the correctness of their figures and detail, and with competent inspectors, whose seal of proper construction, in accordance with plans and local building regulations, shall be a condition essential to the continuance of the work, the disgrace of such catastrophes as recently occurred will be avoided, or if they occur the blame can be readily placed where it belongs and the guilty parties can be held responsible.—*Chicago Times-Herald.*

LAMPS AND THEIR DANGERS.

FEW people realize the extent of the destruction and loss of life annually caused by lamp accidents. In 1893, in London alone, no less than forty-eight lives were lost by fires due to the explosion or upsetting of petroleum lamps. Last year the number was thirty-three, and the fire brigade were called to 418 fires due to the same cause, while the number of smaller fires to which the brigade were not called, and which were caused by lamp accidents, was probably between 1,500 and 2,000. During the past two months ten deaths have resulted in London from lamp accidents, or at the rate of sixty perannum. These figurs are for London only, with its almost universal gas supply. There are no reliable statistics for the country as a whole, but it is evident that the annual loss of life and destruction of property must be enormous.

About two-thirds of the accidents reported are due to the overturning of the lamp and the smashing of the reservoir, which is unfortunately usually made of glass or china. The other third are caused by explosions.

The conditions of explosion vary with almost every lamp, and with the "flash point" of oil used in it. As the oil sinks in the reservoir air is drawn in, and when the oil is warmed to a certain point it gives off inflamable vapour which mixes with the air. A small proportion of this vapour yields the *maximum* explosive force—when the air is saturated with the vapour, as happens generally by the the time the reservoir is nearly empty, the gases contained are highly inflamable, and will take fire almost like gunpowder if the lamp is smashed, but they are much less explosive. The gas may come up the sides of the wick and be ignited by the flame, or a draught caused by the opening of a door may blow the flame down into the reservoir or draw gas up towards the flame, or the wick may be turned too low and the lighted part pass inside.

The first, and by far the most important condition of a safety lamp, is that the reservoir should be of metal, and not of china, glass, or similar fragile metals.

Other conditions are, that the wick should be enclosed in a wick tube passing almost to the bottom of the reservoir, and so shutting off any possible communication between the air inside and the flame. Even if the lighted wick were turned down, and were to pass the tube still burning, it must be extinguished in the liquid oil at the bottom. The wick ought to fit the tube so that when the oil falls to the bottom no air will pass up the side of the wick.

One principal precaution necessary is, that the burner and wick tube should screw securely into the reservoir, so that they will not come apart in case of a fall. There are other matters, such as the provision of a broad base, so that the lamp may not be top-heavy; but the three suggestions named are by far the most important.—*The Citizen.*

A VERY CURIOUS TECHNICAL POINT.

A VERY curious technical point is to be decided by the Bureau of Yards and Docks of the Navy Department at Washington, and architects will be interested in the result. It seems from the newspaper accounts, that the Government is building a dry-dock at the Brooklyn Navy Yard, and a large number of piles are to be driven. The site of the dock is now under water, and the contractors, in order to get the piles down to the requisite depth, place "followers" on top of them, and, by driving the followers, push the submerged piles to the necessary depth. To this arrangement, however, the supervising engineer, Mr. Menocal, objects, and claims that the contractors should sheet-pile the ground, and pump out the water to a depth sufficient to allow the piles to be driven by direct blows to the depth intended. As the contractors do not wish to do this, and Mr. Menocal is not willing to accept piling driven with a follower, it has been agreed to refer the question to the Department officials.

The common impression among architects is certainly unfavorable to driving piles with a follower. According to the daily papers, Mr. Menocal considers that "the stability of the piling is jeopardized" by driving with a follower. What this means we will not attempt to say, but we presume that Mr. Menocal's real object is just that which any architect would make—that in driving piles with a follower, it is not only impossible to give as solid a blow as by direct impact of the hammer, but, owing to the varying rebound of the follower from the head of the pile, it is impossible to tell when piles so driven have reached the firm stratum to which it is commonly intended to drive them. As every one knows, the arrival of the foot of a pile at the bearing stratum is shown partly by the rebound of the hammer from the top of the pile, and partly, as well as more accurately, by the diminished distance to which it sinks under the blow. The sinking at the last blow is usually the most important factor in determining the load that the piles will bear safely, and it is of the utmost importance that it should be accurately measured. Where a follower is used, this essential measurement is rendered misleading. If it is measured, as is usually the case, at the hammer, all that can be shown is the decent of the follower. This may, owing to the crushing of its end, and of the corresponding end of the pile, be much greater than that of the pile itself; or, if the follower is elastic, and its top well "broomed up," a blow on its top followed by a lively rebound, may have a very significant effect in driving the pile below; so, that data drawn from the sinking of the follower are nearly worthless for estimating the resistance of the piles driven with them. Iron plates, with sockets on each side, are sometimes interposed between the pile and the follower, with advantage, and it is to be hoped that the official investigation will serve to elucidate all these points.—*American Architect and Building News.*

REPORT OF COMMITTEE ON "STRENGTH OF BRIDGE AND TRESTLE TIMBERS."

THE Committee appointed to report on "Strength of Bridge and Trestle Timbers, with special reference to Southern Yellow Pine, White Pine, Fir and Oak," desires to present herewith, as part of their report, the very valuable data, compiled by the Chairman of the Committee, relative to tests of the principal American bridge and trestle timbers

and the recommendations of the leading authorities on the subject of strength of timber during the last twenty-five years, embodied in the Appendix to this report and tabulated for easy reference in the accompanying tables I to IV.

The uncertainty of our knowledge relative to the strength of timber is clearly demonstrated after a perusal of this information, and emphasizes, better than long dissertations on the subject, the necessity for more extensive, thorough and reliable series of tests, conducted on a truly scientific basis, approximating as nearly as possible actual conditions encountered in practice.

The wide range of values recommended by the various recognized authorities is to be regretted, especially so when undue influence has been attributed by them in their deductions to isolated tests of small-sized specimens, not only limited in number, but especially defective in not having noted and recorded properly the exact species of each specimen tested, its origin, condition, quality, degree of seasoning, method of testing, etc.

The fact has been proved beyond dispute that small-size specimen tests give much larger average results than full-size tests, owing to the greater freedom of small selected test pieces from blemishes and imperfections and their being, as a rule, comparatively drier and better seasoned than full-size sticks. The exact increase, as shown by tests and by statements of different authorities, is from ten to over one hundred per cent.

Great credit is due to such investigators and experimenters as Professors G. Lanza, J. B. Johnson, H. T. Bovey, C. B. Wing, and Messrs. Onward Bates, W. H. Finley, C. B. Talbot, and others, for their experimental work and agitation in favor of full-size tests. Professor G. Lanza, R. H. Thurston and Wm. H. Burr have contributed valuable treatises on the subject of strength of timber. The extensive series of small and full-size U. S. Government tests, conducted in 1880 to 1882 at the Watertown Arsenal under Col. T. T. S. Laidley, and more recently the very elaborate and thorough timber tests being conducted by the U. S. Forestry Division under Dr. B. E. Fernow, Chief, and Prof. J. B. Johnson of Washington University, St. Louis, afford us to-day, in connection with the work of the above mentioned experimenters, our most reliable data from a practical standpoint.

The test data at hand and the summary criticisms of leading authorities seem to indicate the general correctness of the following conclusions:

First—Of all structural materials used for bridges and trestles, timber is the most variable as to the properties and strength of different pieces classed as belonging to the same species, hence imposible to establish close and reliable limits of strength for each species.

2d—The various names applied to one and the same species in different parts of the country lead to great confusion in classifying or applying results of tests.

3d—Variations in strength are generally directly proportional to the density or weight of timber.

4th—As a rule, a reduction of moisture is accompanied by an increase in strength; in other words, seasoned lumber is stronger than green lumber.

5th—Structures should be, in general, designed for the strength of green or moderately seasoned lumber of average quality and not for a high grade of well-seasoned material.

6th—Age or use do not destroy the strength of timber, unless decay or season-checking takes place.

7th—Timber, unlike materials of a more homogeneous nature, as iron and steel, has no well-defined limit of elasticity. As a rule, it can be strained very near to the breaking point without serious injury, which accounts for the continuous use of many timber structures with the material strained far beyond the usually accepted safe limits. On the other hand sudden and frequently inexplicable failures of individual sticks at very low limits are liable to occur.

8th—Knots, even when sound and tight, are one of the most objectionable features of timber, both for beams and struts. The full-size tests of every experimenter have demonstrated, not only that beams break at knots, but that invariably timber struts will fail at a knot or owing to the proximity of a knot, by reducing the effective area of the stick and causing curly and cross-grained fibers, thus exploding the old practical view that sound and tight knots are not detrimental to timber in compression.

9th—Excepting in top logs of a tree or very small and young timber, the heart-wood is, as a rule, not as strong as the material farther away from the heart. This becomes more generally apparent, in practice, in large sticks with considerable heart-wood cut from old trees in which the heart has begun to decay or been wind-shaken. Beams cut from such material frequently season-check along middle of beam and fail by longitudinal shearing.

10th—Top logs are not as strong as butt-logs, provided the latter have sound timber.

11th—The results of compression tests are more uniform and vary less for one species of timber than any other kind of test; hence, if only one kind of test can be made, it would seem that a compressive test will furnish the most reliable comparative results.

12th—Long timber columns generally fail by lateral deflection or "buckling" when the length exceeds the least cross-sectional dimension of the stick by twenty, in other words the column is longer than twenty diameters. In practice the unit stress for all columns over fifteen diameters should be reduced in accordance with the various rules and formulæ established for long columns.

13th—Uneven end-bearings and eccentric loading of columns produce more serious disturbances than usually assumed.

14th—The tests of full-size long compound columns, composed of several sticks bolted and fastened together at intervals, show essentially the same ultimate unit resistance for the compound column as each component stick would have, if considered as a column by itself.

15th—More attention should be given in practice to the proper proportioning of bearing areas, in other words the compressive bearing resistance of timber with and across grain, especially the latter, owing to the tendency of an excessive crushing stress across grain to indent the timber, thereby destroying the fiber and increasing the liability to speedy decay, especially when exposed to the weather and the continual working produced by moving loads.

The aim of your Committee has been to examine the conflicting test data at hand, attributing the proper degree of importance to the various results and recommendations, and then to establish a set of units that can be accepted as fair average values, as far as known to-day, for the ordinary quality of each species of timber and corresponding to the usual conditions and sizes of timbers encountered in practice. The difficulties of executing such a task successfully

cannot be overrated, owing to the meagreness and frequently the indefiniteness of the available test data, and especially the great range of physical properties in different sticks of the same general species, not only due to the locality where it is grown, but also to the condition of the timber as regards the percentage of moisture, degree of seasoning, physical characteristics, grain, texture, proportion of hard and soft fibers, presence of knots, etc., all of which affect the question of strength.

Your Committee recommends, upon the basis of the test data at hand at the present time, the average units for the Ultimate Breaking Stresses of the principal timbers used in bridge and trestle constructions shown in the accompanying table.

Average Safe Allowable Working Unit Stresses in Pounds per Square Inch.

Recommended by the Committee on "Strength of Bridge and Trestle Timbers."

American Association of Railway Superintendents, Bridges and Buildings, 5th Annual Convention, New Orleans, October, 1895.

KIND OF TIMBER.	Tension.		Compression.			Transverse Rupture.		Shearing.	
			With Grain.						
	With Grain.	Across Grain.	End Bearing.	Columns Under 15 Diams.	Across Grain.	Extreme Fiber Stress.	Modulus of Elasticity.	With Grain.	Across Grain.
FACTOR OF SAFETY.	10.	10.	5.	5.	4.	6.	2.	4.	4.
White Oak	1000	200	1100	900	500	1000	550000	200	1000
White Pine	700	50	1100	700	200	700	500000	100	500
Southern Long-leaf or Georgia Yellow Pine	1200	60	1600	1000	350	1200	850000	150	1250
Douglas, Oregon & Wash. Fir or Pine	1200		1600	1200	300	1100	700000	150	
Yellow Fir, Red Fir	1000					800			
Northern or Short-leaf Y. L. Pine	900	50	1200	800	250	1000	600000	100	1000
Red Pine	900	50	1200	800	200	800	600000		
Norway Pine	800		1200	800	200	700	600000		
Canadian [Ottawa] White Pine	1000			1000				100	
Canadian [Ontario] Red Pine	1000			1000		800	700000	100	
Spruce and Eastern Fir	800	50	1200	800	200	700	600000	100	750
Hemlock	600			800	150	600	450000	100	600
Cypress	600		1200	800	200	800	450000		
Cedar	800		1200	800	200	800	350000		100
Chesnut	900			1000	250	800	500000	150	100
Califoania Redwood	700			800	200	750	350000	100	
California Spruce				800		800	600000		

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			With Grain.						
	With Grain.	Across Grain.	End Bearing.	Columns Under 15 Diams.	Across Grain.	Extreme Fiber Stress.	Modulus of Elasticity.	With Grain.	Across Grain.
White Oak	10000	2000	7000	4500	2000	6000	1100000	800	4000
White Pine	7000	500	5500	3500	800	4000	1000000	400	2000
Southern Long-leaf or Georgia Yellow Pine	12000	600	8000	5000	1400	7000	1700000	600	5000
Douglas, Oregon & Wash. Fir or Pine	12000		8000	6000	1200	6000	1100000	600	
Yellow Fir, Red Fir	10000					5000			
Northern or Short-leaf Yel. Pine	9000	500	6000	4000	1000	6000	1200000	400	4000
Red Pine	9000	500	6000	4000	800	5000	1200000		
Norway Pine	8000		6000	4000	800	4000	1200000		
Canadian [Ottawa] White Pine	10000			5000				350	
Canadian [Ontario] Red Pine	10000			5000		5000	1400000	400	
Spruce and Eastern Fir	8000	500	6000	4000	700	4000	1200000	400	3000
Hemlock	6000			4000	600	3500	900000	350	2500
Cypress	6000		6000	4000	700	5000	900000		
Cedar	8000		6000	4000	700	5000	700000		1500
Chesnut	9000			5000	900	5000	1000000	600	1500
California Redwood	7000			3000	800	4500	700000	400	
California Spruce				4000		5000	1200000		

In addition to the units given in the table, attention should be called to the latest formulæ for long timber columns, mentioned more partucularly in the Appendix to this report, which formulæ are based upon the results of the more recent full-size timber column tests and hence should be considered more valuable than the older formulæ derived from a limited number of small-size tests. These new formulæ are Professor Burr's, App. I.; Professor Ely's, App. J.; Professor Stanwood's, App. K.; and A. L. Johnson's, App. V.; while C. Shaler Smith's formulæ will be better understood after examining the explanatory notes contained in App. L.

Attention should also be called to the necessity of examining the resistance of a beam to longitudinal shearing along the neutral axis, as beams under transverse loading frequently fail by longitudinal shearing in place of transverse rupture.

In addition to the Ultimate Breaking Unit Stress the designer of a timber structure has to establish the Safe Allowable Unit Stress for the species of timber to be used. This will vary for each particular class of structures and individual conditions. The selection of the proper "Factor-of-Safety" is largely a question of personal judgment and experience, and offers the best opportunity for the display of analytical and practical ability on the part of the designer. It is difficult to give specific rules. The following are some of the controlling questions to be considered.

The class of structure, whether temporary or permanent, and the nature of the loading, whether dead or alive. If live, then whether the application of the load is accompanied by severe dynamic shocks and pounding of the structure. Whether the assumed loading for calculations is the absolute maximum rarely to be applied in practice or a possibility that may frequently take place. Prolonged heavy steady loading and also alternate tensile and compressive stresses in the same piece will call for lower averages. Information as to whether the assumed breaking stresses are based on full-size or small-size tests or only on interpolated values, averaged from tests of similar species of timber, is valuable in order to attribute the proper degree of importance to recommended average values. The class of timber to be used and its condition and quality. Finally the particular kind of strain the stick is to be subjected to and its position in the structure with regard to its importance and the possible damage that might be caused by its failure.

In order to present something definite on this subject, your Committee presents the accompanying table showing the Average Safe Allowable Working Unit Stresses for the principal bridge and trestle timbers, prepared to meet the average conditions existing in railroad timber structures, the units being based upon the ultimate breaking unit stresses recommended by your Committee and the following factors-of-safety, viz.:—

Tension, with and across grain - - -	Ten
Compression, with grain - - -	Five
" across grain - - -	Four
Transverse Rupture, Extreme Fiber Stress -	Six
" " Modulus of Elasticity -	Two
Shearing, with and across grain - -	Four

In conclusion your Committee desires to emphasize the importance and great value to the railroad companies of the country of the experimental work on the strength of American timbers being conducted by the Forestry Division of the U. S. Department of Agriculture and to suggest that the American Association of Railway Superintendents of Bridges and Buildings endorse this view by official action and lend its aid in every way possible to encourage the vigorous continuance of this series of government tests, which bids fair to become the most reliable and useful work

on the subject of strength of American timbers ever undertaken. With additional and reliable information on this subject far reaching economies in the designing of timber structures can be introduced, resulting not only in a great pecuniary saving to the railroad companies, but also offering a partial check to the enormous comsumption of timber and the gradual diminution of our structural timber supply.

WALTER G. BERG, Chairman,
J. H. CUMMIN,)
JOHN FOREMAN,) Committee.
H. L. FRY)

ELECTRIC LIGHT.

COST per lamp per year before and after public ownership, the "after" service being the same as, or better, than the service it replaced:

	Before.	After.
Bangor, Maine	$150	$48
Lewiston, Maine	182	55
Peabody, Mass.	185	62
Bay City, Mich.	110	58
Huntington, Ind.	146	50
Goshen, Ind.	156	77
Bloomington, Ill.	111	51
Chicago, Ill.	250	96
Elgin, Ill.	266	43
Aurora, Ill.	326	70
Fairfield, Ia.	387	70
Marshalltown, Ia.	125	27
Jacksonville, Fla.	24	5

The statements rest upon official reports and returns of municipal officers.

THE ASSOCIATION OF RAILWAY SUPERINTENDENTS OF BRIDGES AND BUILDINGS.

RESOLUTION ADOPTED BY THE ASSOCIATION AT THE FIFTH ANNUAL CONVENTION AT NEW ORLEANS, OCTOBER 15, 1895.

WHEREAS a most comprehensive and valuable series of investigations into the properties of wood and tests of the strength of our commercial timbers have been carried on in the Division of Forestry of the U. S. Department of Agriculture.

WHEREAS these investigations have already demonstrated that a most decided improvement in the practice with timber structures and use of wood and a saving of millions of dollars' worth of wood material are attainable as a result of these investigations.

BE IT RESOLVED, that we, the American International Association of Railway Superintendents of Bridges and Buildings, assembled in regular session, at our Fifth Annual Convention at New Orleans, La., October 15, 1895, endorse, as railroad officials in charge of the construction and maintenance of timber structures and buildings of railroads throughout the United States, the work thus inaugurated by the U. S. Government as tending towards a most needful and rational economy of our forest resourses and desirable improvements in their use, resulting not only in a great saving to users of timber throughout the Country, but especially offering a valuable guarantee for the absolute safety of properly designed timber structures;

RESOLVED, further, that we ask our Representatives in Congress to make liberal appropriations for the continuance and more rapid advance of this work, in order to secure, as quickly as possible, the much needed information, believing that the Government alone is in a position to secure it and that it is true economy to provide it without delay;

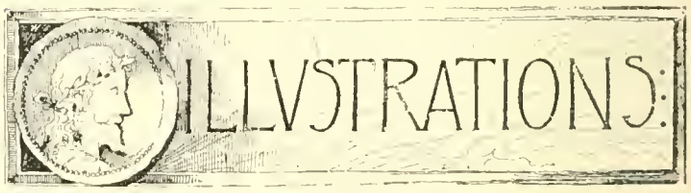
RESOLVED, further, that these resolutions be transmitted to the President of the Senate, the Speaker of the House of Representatives, the Secretary of Agriculture, the Chairman of the Committee on Agriculture of the Senate, and the Chairman of the Committee on Agriculture of the House of Representatives.

AN APT SIMILE.

WHEN a firm stops advertising people get the idea that they have discontinued business. If the pier of a bridge is to be built in the middle of a river, the builders commence by sinking stones for the foundation. If they drop the first stone and quit because they should not see it, the pier would never be built. If they dropped a dozen stones, one on top of the other, and quit before the pier was big enough to stick out of the water, they would lose their time and stones. But if they go on, put in a good solid foundation and build up from that, they will in time raise a pier that will be strong and permanent and that will hold up a useful and necessary bridge. It is just so with advertising. The first advertisement you drop in only serves as a foundation· they do not amount to anything if you do not drop in enough of them, but if you keep on piling one top of the other, in the end you will have a pier which will sustain the bridge of business all the rest of your life.—*Granite Producer and Builder.*

DEMOLITION OF AN ANCIENT LONDON HOSTELRY.

AT London, England, workmen commenced pulling down the famous old "Goose and Gridiron," St. Paul's churchyard, which was built directly after the Great Fire. While Sir Christopher Wren was superintending the erection of St. Paul's Cathedral, the St. Paul's Freemason's Lodge, of which he was Master, used to meet in this house. Within an upper room the great architect presided over the meetings of the lodge for a period of eighteen years. There he presented to his brethren three mahogany candlesticks, also the trowel and mallet that he used when he laid the foundation-stone of the cathedral in 1675. The site of the "Goose and Gridiron" was, before the fire, occupied by the "Mitre" Tavern, the first London music house. For a good while the "Goose and Gridiron" has been closed. The building to be erected on the site will form part of the warehouse of Messrs. Hitchcock & Williams.—*The Citizen.*



The management of this journal desires to extend a cordial invitation to all architects on this coast and elsewhere to contribute designs for publication.

Drawings should be made with perfectly black lines on a smooth white surface. Good tracings, if made with black ink, answer the purpose.

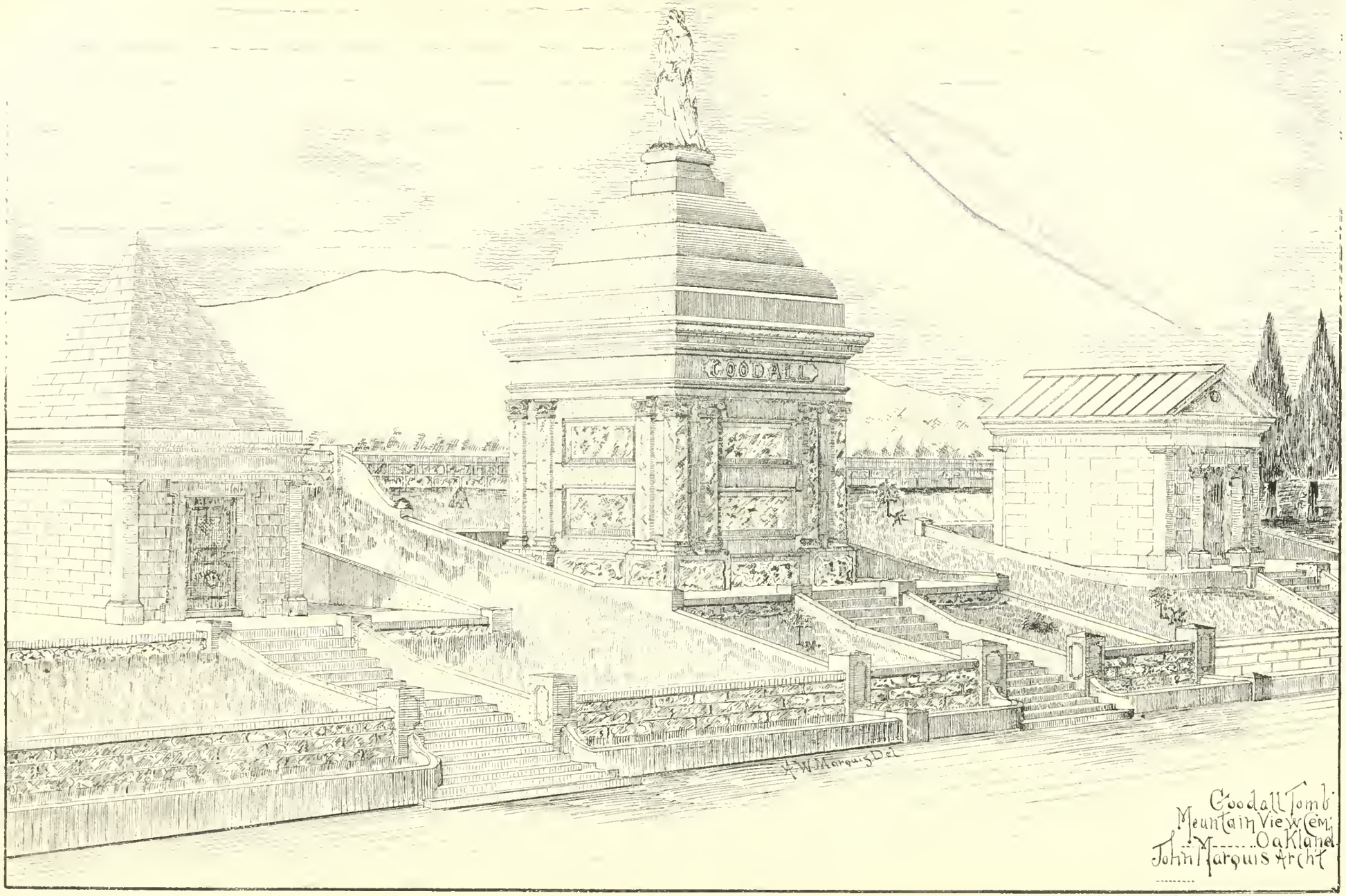
The designs selected will be published without charge. All drawings, whether accepted or not, will be returned to their authors, who must bear express charges both ways.

CHATEAU de Chaumont, J. W. Krause, del.

RESIDENCE for H. Sullivan, Esq.; Hudson & Krause, Architects.

GOODALL Tomb, Mountain View, John Marquis, Architect.

DESIGN for a N. S. G. W. building; B. J. S. Cahill, Architect.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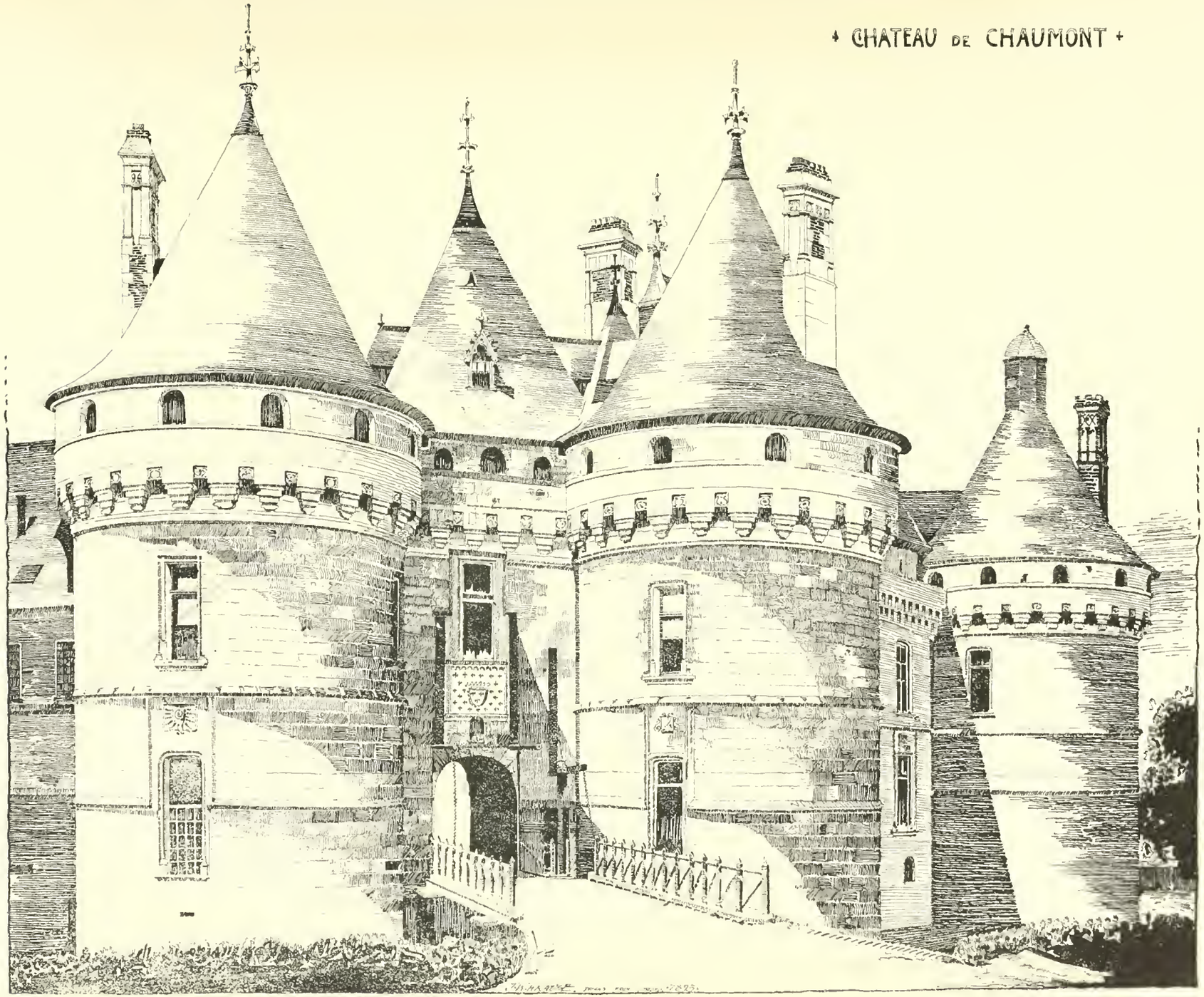
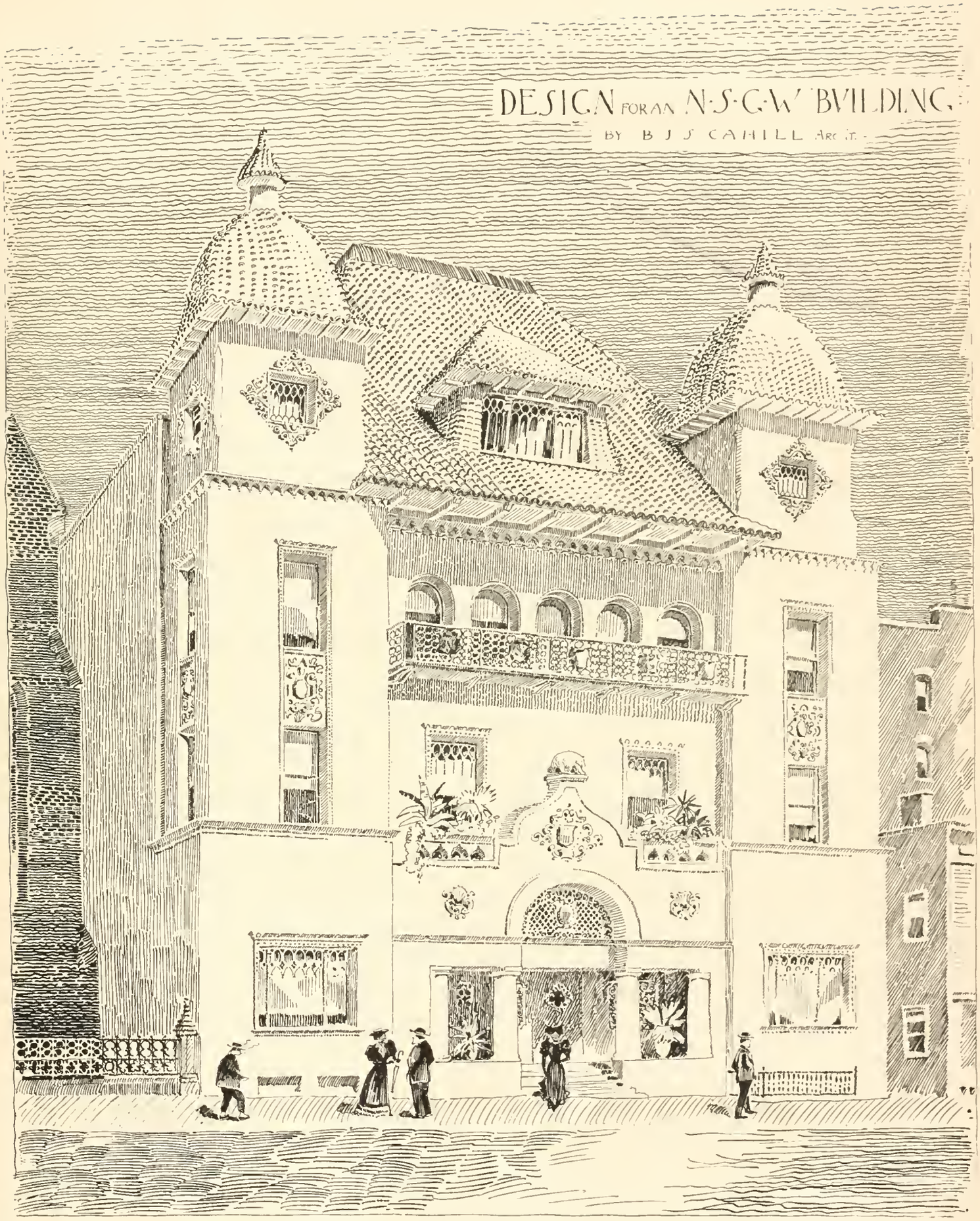
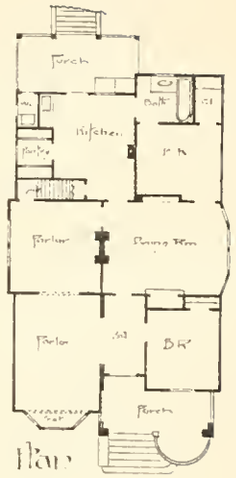
F. W. Marquis Del
Goodall Tomb
Mountain View Cem.
Oakland
John Marquis Arch't

+ CHATEAU DE CHAUMONT +




DESIGN FOR AN N·S·G·W BUILDING
BY B J S CAHILL ARCHT.

RESIDENCE FOR
H. SULLIVAN ESQ.
HUDSON & KRAUSE
ARCHITECTS



Plan

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. W. P. Moore, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Techinical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

TWENTY-NINTH ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS.

If the architects of this country could only manage to construct their buildings with the same degree of skill and polish with which Mayor Walbridge built his words and phrases into one of the neatest little speeches of welcome we have ever listened to, he could not say, as he did, that just as we Americans have no language, having borrowed it from other peoples, so we have no architecture, having borrowed from other races the styles they had invented. The analogy he established between language and architecture was a very welcome variant upon the ordinary comparison at such times with "frozen music." The Mayor's felicitous remarks and the courtesy of Professor Ives, the Director of the Museum of Fine Arts, made the closing of the first day of the Twenty-ninth Annual Convention of the American Institute of Architects at St. Louis really memorable.

As for what preceded it, it is hard to escape asking the questions: "Is this sort of thing worth really while? What does it all amount to after all? Can a machine that needs so much oiling to prevent friction be properly designed? Can it ever do the work it was intended to accomplish?" While the coalition of the American Institute of Architects with the Western Associaton of Architects, six years ago, was beyond dispute a wise measure, it is also pretty certain that a grave mistake was made at that time in abolishing the distinction that had thitherto obtained in the Institute between Fellows and Associates.

As the Western Association had but one grade of membership, it was impossible that they could be expected to join the Institute as members of the Institute's lower grade, and it was equally nujust that they should all become members of the higher grade over the heads of the Institute members of Associate rank. The only solution was to put all members at the time of the coalition upon an equal footing, and the grade of Associate had to be abolished.

But the need was a temporary one. The coalition has been made; all members of the Institute are now of the same grade and yet they are far from happy, and the cause of their unhappiness, apparently, is that there is too much equality, seeing that the equality is one of name, while the inequality of artistic and intellectual capacity is still conspicuous and as galling to natures of one kind as it is hampering to natures of another kind.

There is a very prounced feeling that the Institue is not that body of *eletes* that it should be, that all the members would like it to be and which can only do good work when it has become such. Yet, all the same, it is a very excellent body, doing useful work and likely to do better as time goes on, for in a civilized and progressive world all things ameliorate, and the very friction that now requires such profuse application of oil is polishing off the offensive crudities that offend the higher sensibilities.

There is no need of resorting to the violent and reactionary measures that some members appear to be dimly hinting at. The cure, or at least, a real and permanent palliative is within reach, and is seemingly a simple one. The feeling that the Institute, as now constituted, is too democratic, or at least, not sufficiently aristocratic, is a natural and healthy one, since it betokens aspiration after higher and better things. If, as is certainly the case, it is felt to be a wrong that the newly-elected youthful practitioner should hold the same rank, so far as the public is advised, with the leaders of the profession of double his years and quadruple his professional experience, things can be set right and information conveyed to the public through the very simple measure of restoring the two grades of membership, Fellowship and Associateship.

In such event, where all would like to be Fellows, while most must remain Associates, how can the separation be effected? Very simply, and by the thoroughly democratic method of selection by ballot.

If it could be arranged that one-quarter or one-fifth of the present members who received the highest number of votes should be advanced to a higher grade, something would have been gained which would have a definite meaning to the public and a real value to the Institute and the profession at large. Having taken this step, the next would be to establish the regulation of the method of examination by which those members of the second grade could obtain entrance to the first rank, and with this would be secured the further great gain that whatever may really have been the qualifications and attainments of that portion of the first grade who obtained the rank through the suffrage of their fellows, those who were advanced later certainly did possess a definite and established professional capacity, and those men of real ability who now refrain from joining the Institute because of its, to their thinking, too democratic composition, could no longer plead their unwillingness to endure its leveling tendencies.

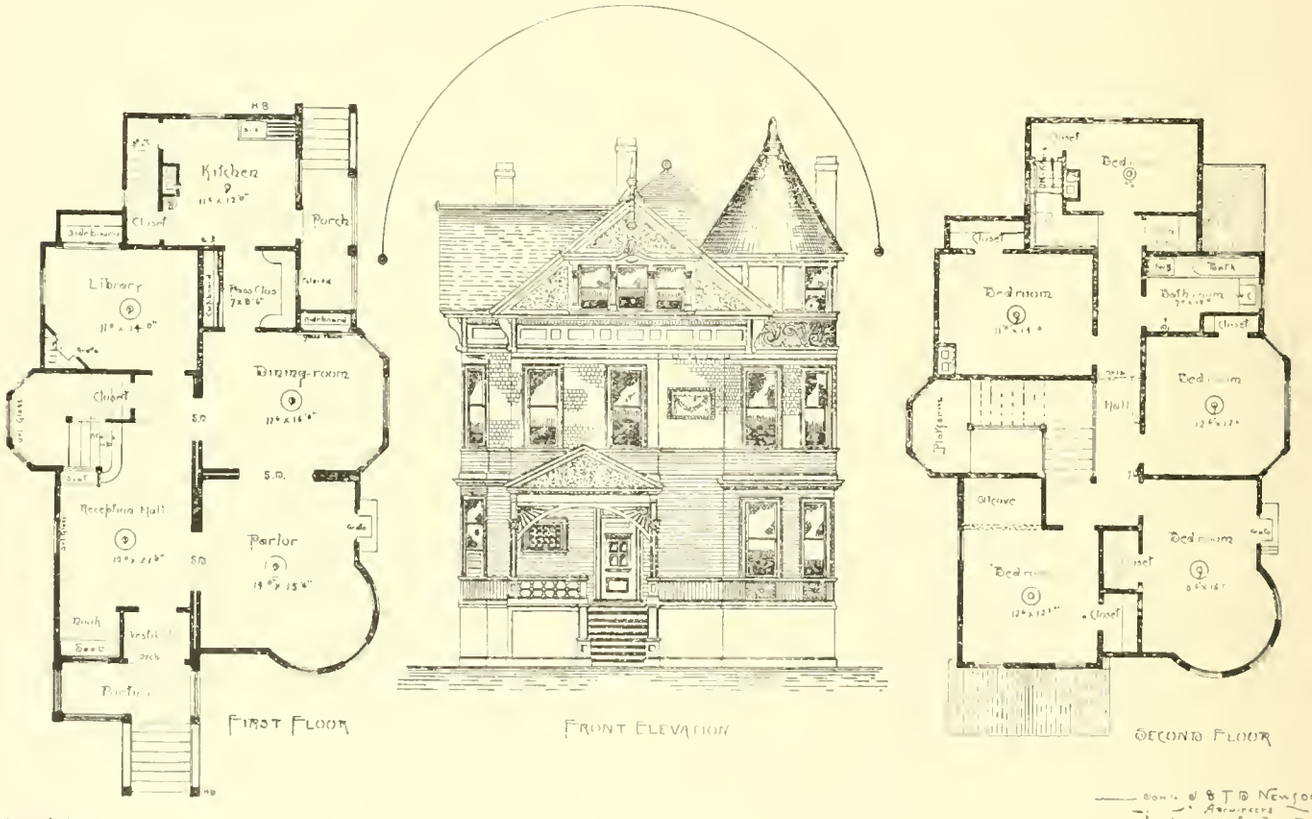
Some such change as this appears to be the way to meet and overcome the feeling of dissatisfaction that seems to be in the air, and a change like this can be adopted more easily and more safely than the more radical ones that some members would like to see enforced.

Although but little was actually said on the subject, yet all through the discussion, during the first morning session

of the matter of amending the by-laws, more than one debater tried to interject it, but the discussion was by the strict ruling of the chairman kept from wondering from the point, and the noon lunch gave time for that informal interchange of views that has so often saved the situation.

As to the amendments to the by-laws, these amounted practically to recinding the action taken at the last convention, which seemed to restrict the freedom of action of the Chapters. Mr. Kendel, acting as spokesman of the Directors, explained that the action of the last convention had not been intended to restrict, but actually to enlarge the powers of the Chapters, but that since the measure had been generally misunderstood it was evident that, if nothing else was the matter, the language of the obnoxious by-laws was obscure and misleading. He therefore brought forward a series of amendments to Section X of the by-laws which, after prolonged debate and some opposition, were finally adopted.

(To be Continued.)



SAN FRANCISCO CEMETERIES.

SAN FRANCISCO is said to be suffering from its cemeteries, which are, as it happens, now placed on hills, to the windward of the main portion of the city, in such a position that the trade-winds from the Pacific, which blow for two months of the year, bring down among the living whatever miasm may rise from the sepulchres of the dead. A large school-house, situated near one of the cemeteries, was recently closed, on account of the repeated outbreaks of diphtheria among the pupils, and some of the physicians of the city attribute these as well as the other troubles from zymotic diseases, to the air from the graveyards. We do not remember having heard diphtheria before attributed to cemetery exhalations, but it is quite possible that it might be caused by them, and the people of the city are quite justified in urging, as they are now doing, the prohibition of further interments within the city limits, and even the removal of the bodies from the cemeteries already existing. Although the latter would be a rather serious undertaking, it is not likely that diphtheria will diminish much until it is accomplished. Few people have any idea of the time during which noxious and corrupting substances, buried in the ground beyond the reach of the nitrifying microbe, will continue to saturate the earth, and the surrounding atmosphere, with foul vapors. It is commonly assumed that within a few months, or a few years, at the utmost, the products of decomposition are absorbed by the soil, and converted into harmless inorganic substances; but Professor Lanciani tells us that under his direction, trenches were dug in the gardens of Mæcenas, which were made about the year 40 B. C. by filling in twenty-five feet of clean soil over an old cemetery on the Esquiline hill in Rome. The cemetery had long been a nuisance and danger to that part of the city, and Mæcenas earned the gratitude of his contemporaries by buying it and covering it up. Nevertheless, after two thousand years of disuse and exposure to such purification as a good covering of clean soil could effect in it, Lanciani found it necessary, when his men had reached the bottom of the earth-filling, and exposed the ancient surface, to relieve them at short intervals, in order that they might escape suffocation from the horrible stench which proceeded from the remains of the people whose bodies were laid there long before the Christian era.—*American Architect and Building News.*

BOOKS AND PERIODICALS.

"In Sight of the Goddess" is the complete novel in the LIPPINCOTTS' MAGAZINE for November. This novel by Harriet Riddle Davis will compare favorably with the many that have been published in this magazine. The table of contents contains an interesting variety of articles, among others "The Pet Meanness" which contains more truth than poetry and cannot be read without a smile.

CALIFORNIA GOLD MILL PRACTICES by Ed. B. Preston, M. E., issued in Bulletin No. 6 by the State Mining Bureau by J. J. Crawford, State Mineralogist.

Much valuable information is given not only in regard to improved machinery now in use at the mines, but to the manipulation of the ore or rocks from which gold is obtained. Mr. Crawford says that any citizen of this State may obtain a copy free by sending three cents for postage with their application, to the California State Mining Bureau, No. 24 Fourth street, San Francisco. The price to those living out of the State is fifty cents.

THE AMERICAN ARCHITECT AND BUILDING NEWS for October 26th, contains an interesting article entitled "Suggestions by Which a Greater Influence May be Exercised by the Institute Among the Architects of the South West, at the Same Time the Elevation of the Profession Before the Public" being a paper by Mr. James B. Cook, F. A. I. A. of Memphis, Tenn., read at the Twenty-Ninth Convention of the American Institute of Architects, held at St. Louis, Mo., Oct. 15th and 17th, 1895. The length of the article prevents our giving it in full, but members of the Institute, and architects in general will find it well worthy of their serious consideration.

Two articles in the FORTNIGHTLY REVIEW for October, 1895, show the great interest now taken in improvements of both the Army and Navy, the one by Major Arthur Griffiths entitled "Advancement in the Army," the other by W. Laird Clowes "The Naval Maneuvres." These two articles taken in connection with another "The Foreign Policy of England" shows the unsettled feeling of the people on the other side of the Altantic. A general desire to be prepared for the worst as well as a dread of what that may be.

The ever welcome Monthly Magazine INDUSTRY for November, 1895, is on our desk containing a very interesting table of contents. The article on "The Modern Gas Engine" will be a surprise to many who have only perfunctory knowledge of that useful little engine, and look upon it as well enough in its way. "Compressed Air for Street Railways" will have an interest for all who ride in the street cars, and that includes all of our community. To those not acquainted with this magazine, it will be a surprize to find so much information of a useful and interesting nature condensed with in its covers. Published by the Industral Publishing Company, 40 California street, San Francisco.

LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

CONSTRUCTION OF CONTRACT.—Whether a sum named in a contract is to be regarded as liquidated damages or as a penalty depends on the intention of the parties as it appears from the nature of the contract, the situation of the parties, and surrounding circumstances, and not merely on the language ofthe contract.

Sanford v. First National Bank of Belle Plaine, Supreme Court of Iowa, 63 N. W. Rep. 459.

A BUILDING CONTRACT CONTAINS THE FOLLOWING PROVISIONS: "The contractors shall not make a claim for additional work, unless the same shall be done in pursuance of an order from the architects, and notice of all claims shall be made to the architects, in writing, within ten days of the beginning of such work." The Supreme Court of Minnesota held, that this provision is not effectual limitation upon the legal competency of the parties to the contracts, or their authorized agents, to modify or waive any of the contract, except in the particular manner stipulated.

Michaud v. McGaegor, 63 N. W. Rep. 479.

SET OFF FOR BREACH OF CONTRACT.—Where, upon default of the contractor, the architect, acting for the owner, let to the lowest bidder the contract for the completion of a building, the owner was entitled to set off against the original contractor or any subcontractor the actual amount paid for the completion of the work.

Yeomans v. Parker, Supreme Court of Michigan, 63 N. W. Rep. 316.

LIABILITY FOR INJURY TO EMPLOYE.—The foreman of a bridge gang and a mechanic working under his superintendence are not fellow servants, and the employer is liable for the negligence of the former whereby the latter is injured.

San Antonio & A. P. Ry. Co. v. McDonald, Court of Civil Appeals of Texas, 31 S. W. Rep. 72.

VERIFICATION OF MECHANICS' LIENS.—Chapter seventy-five of the Code creates the mechanics' lien in certain cases, on certain conditions; and section four of such chapter, among other things, provides that such account, to be effectually filed for record as a lien, must be sworn to by the person claiming the lien, or by some person on his behalf. Such oath is an element essential to the creation of the lien, and to the effectual, must be in writing, as a part, in some way, of the writing filed for record. If such affidavit be made before any officer of another state or country, it is not duly authenticated for record until it is subscribed by such officer, and there be annexed to it a certificate of the clerk or other officer of a court of record of such state or country, under an official seal, verifying the genuineness of the signature of the first mentioned officer, and his authority to administer an oath.

Lockhead v. Berkeley Springs Waterworks & Improvement Co., Supreme Court of Appeals of West Virginia, 21 S. E. Rep. 1031.

SUFFICIENCY OF VERIFICATION.—A verification of a mechanics' lien which states that affiant knows the contents thereof, and believes the same to be "true," is not invalidated by the use of the word "true" instead of "just," as provided by statute. A verification of a claim of mechanics' lien is not invalid because it refers to such claim of lien as "the foregoing lien." A lien claim which states that the contractor entered into an oral contract with claimant to furnish materials for the construction of said building, and that, in accordance with said contract, claimant furnished the material described, sufficiently shows to whom the materials were furnished.

Sautter v. McDonald, Supreme Court of Washington, 40 Pac. Rep. 418.

PATROL EVIDENCE IN THE INTERPRETATION OF CONTRACTS.—In arriving at the real intention of the parties, as shown by the language employed by them in a contract, and in order to make a correct application of the terms used to the subject-matter and objects referred to, when the same are not clearly expressed, the situation of the parties, and the surrounding circumstances may be considered in construing the contract, but it must be borne in mind that it is the language of the contract itself that is to be construed, and when the parties reduce their agreement to writing no other language employed by them in making the contract can be resorted to, except that furnished by the instrument itself.

Robinson v. Hyer, Supreme Ct. Fla., 17 Se. Reporter, 745.

BUSINESS MOSAICS.

If there is an architect in the city who is not a subscriber to the CALIFORNIA ARCHITECT AND BUILDING NEWS now is the time to correct the mistake, walk up to the office, 408 California street, room 17; hand in your name for the coming year you will be allowed November and December numbers without charge if you subscribe at once.

"There is certainly a strong odor of tobacco. Does that policeman smoke?" "I don't know mum; he only died last week."—*Life.*

For facts about Paints, see the advertisement of W. P. Fuller & Co., on the outside cover of this journal. As every good housekeeper is anxious about the walls of her house, she should make a point of finding out the merits of **Duresco,** the new wall finish, or Washable Water Color.

"No, Willie, dear," said mamma, "no more cakes tonight. Don't you know you cannot sleep on a full stomach?" "Well," replied Willie, "I can sleep on my back." —*Harper's Round Table.*

A. Steiger Son's.—Architectural Terra Cotta can be supplied in any quantity, as well as every thing in their line. Call at 206 Market street, and be convinced of the truth of this statement. If you have not time to call, remember their telephone, Main, No. 5393.

Miss Yearsy—Do you think a woman ought to work for a husband? MISS QUICK—Yes, till she gets him.—*Melbourne Meekly Times.*

If we judge by the increasing amount of concrete work now being done in the city we should think the firm of W. R. Grace & Co., 203 California street, must be keep busy to supply the demand of Portland cements. As this well known firm always have the best brands in the market on hand it is no wonder their sales are large.

"Where is the man who keeps the restaurant?" said the disgusted customer. "He's gone out to lunch," replied the cashier. *Town and Country Journal.*

The Gas Stove Department of the San Francisco Gas Light Co., has been the means of producing comfort and health to many a housekeeper of this city. Until the lady of the house has made the experiment of cooking by gas, she had no idea of the saving of time, health and temper which the use of gas for this purpose can accomplish. In fact making housekeeping a pleasure instead of a burden. We notice in most of the new houses in Richmond the gas grate for heating, as well as the gas stove for cooking, are almost universal. Call at 226 Post street and find out all about it.

Smith & Young, 723 Market street, San Francisco, and 230 South Spring street, Los Angeles, keep always on hand an endless supply of Building Materials. If you don't see what you want, ask for it, and you will hardly ever be disappointed.

Hungerford—Do you believe, Doctor, that the use of tobacco tends to shorten a man's days? DR. POWELL—I know that it does. I tried to stop it once, and the days were about ninety hours long.—*Truth.*

A. Zellerback & Sons, 419 and 421 Clay street, is the place to go if you want anything in the paper line; this Journal would use nothing but paper furnished by them. An endless variety may be found at their warehouses from which all wants can be supplied.

Joseph Budde, the successor of Wm. Smith, late of 21 Montgomery street, can be found at his present headquarters, 575 Mission street.

It should be remembered in giving your orders for sanitary appliances to Mr. Budde, you are not only doing what you wish others to do to you, but you are patronizing home industry.

The factory and show room of Mr. Budde are always open to the public, and thus people can be convinced they get what they pay for.

"That whiskey is fifteen years old. I know it because I've had it that long myself." THE COLONEL—By jove! sir, you must be a man of phenomenal self-control.—*Life.*

Architectural and Ornamental Iron work is a special feature of the Vulcane Iron Works, 135–145 Fremont street, San Francisco. A horse housed in a stable fitted with their stable fixtures would think he was in a Prince's stable.

It is better to risk the fire than to stay in the frying-pan.—*Life.*

Mr. Samuel Kellett, manufacturer of Plaster Decorations, plaster repaired and whitened at 28 Ellis street, San Francisco, and 375 Twelfth street, Oakland.

"Do you think you can make a good portrait of me?" "I'm afraid I must answer in the negative."—*Ex.*

If you need water only when the wind blows, if you are satisfied to utilize but a small fraction of the water in your well; if you prefer heavy bills for repairs after each storm in winter, by all means use a windmill; but if you want water at any time, and up to the full capacity of your well, put in the Ajax Coal Oil Gas Engine, the latest thing in mechanics, an engine that uses common coal oil for fuel, and is built by the well known firm of Palmer & Rey, San Francisco, Cal.

W. W. Montague & Co., have always on hand a selection of Mantels, Grates and Tiles that is sure to suit the most exacting, to say nothing of their fire place trimmings, and heating apparatus, either by warm air, hot water or steam.

It would take too much space to enumerate all the good things this firm carry in stock, but we may add the Artistic Bronzes must be seen to be fully appreciated.

She—I regret to say that our engagement is at an end. Here is your ring. HE—Then you do not love me? SHE—That is not the question. My husband is coming to take me home to-morrow.—*Pick-Me-Up.*

Before you decide upon what Door Hanger to select, call upon Dunham, Carrigan & Hayden Co., 17–19 Beale street, San Francisco. They claim the American sliding door hanger will cause a great saving of time and expense. See illustration in our advertising columns, page IX.

The thin one—I'd like to see one of those bicycle fiends dare to run over me. THE PLUMP ONE—No fear of that, dear. There would be to much risk of a punctured tire.—*Indianapolis Journal.*

Patronize Home Industry, and at the same time supply yourself with the best building paper on the market. Remember this is a California production entirely, and that there is none "just as good." For sale at 115 Battery street, and by dealers in general. The Paraffine Paint Co., with their well known mark of P. & B., keep in the front rank all the time.

Mowler—I see that some philosophers says that the way to cure yourself of a love affair, is to run away. Do you believe it? CYNACUS—Certainly—if you run away with the girl.—*Truth.*

The San Francisco Lumber Co., who do both a wholesale and retail trade, have their principal office at the foot of Third street. Telephone, Main, 1047. Their yards at the foot of Third street as well as the south side of Channel street, between Fourth and Fifth streets, are supplied with the lumber that you are sure to want.

To those who have examined the show rooms of the J. L. Mott Iron Works, under the charge of Mr. M. S. James, 27 Flood Building we have nothing to say, as actions speak louder than words, and to see is to be convinced, but to those who have neglected the opportunity now presented by Mr. James of seeing the finest selection of bathing utensils in the city, we would say go at once and be convinced that Mr. James can furnish you with what will make your house a joy for ever.

Mrs. Hicks—I thought you seemed to agree pretty well with Mr. Thirdly's sermon this morning. MR. HICKS—How so? MRS. HICKS—You nodded to about everything he said.—*Ex.*

The Revere Rubber Co., 527 Market street, San Francisco are the manufacturers of "Schenck" Swinging Hose Reel. As the use of this Reel reduces your insurance, this alone should make it an object to obtain what is considered by good judges the best in the market. The reason why this is so may be seen in the fact that it is guaranteed to work under any pressure as it has packing boxes that never leak. In fact as it is claimed by the manufacturers in their advertisement on page iv of this journal it is safe, reliable, non-corrosive, simple, durable, ornamental and always ready. What more can be asked?

"If a boy and a-half ate a green apple and a-half in a minute and a-hlf, how would he feel in an hour and a-half?" "Why doubled in half, of course; ask us something harder next time."—*Fun.*

The San Francisco Gas Light Co., have their Gas Stove department at 226 Post street. If ladies who have not done their cooking upon a Gas Stove, will call at this number on Post street, they will be convinced of the comfort, convenience and economy that will follow the purchase and use of a Gas Stove.

In several instances, where this advice has been acted upon, we know the result has been highly satisfactory.

"Have your smoked that cigar I gave you?" "No; the doctor says I mustn't take any violent exetcise."—*Life.*

CITY BUILDING NEWS.

Andover and Eugenia. Additions; contractor, W. Kirshbaum; raising, etc., A. T. Penebsky; cost $1000.

Arlington near Roanoke. Frame cottage; owner, J. M. Mello; contractor, Louis Ceregnino; signed, Oct. 10; filed, Oct. 10; cost $737.

Broadway near Fillmore. Plumbing, gas fixtures, etc.; owner, Mrs. Fannie Held; architect, M. J. Lyon; contractors, Ickelheimer Bro.; signed, Oct. 14; filed, Oct. 15; cost $775.

Broadway and Buchanan. Granite steps, fence, posts, etc.; owner, Annie Donahue; architect, A. Page Brown; contractor, A. McLennan; signed, Oct. 30; filed, Nov. 1; cost $2575.

Bush and Jones. Converting six flats into hotel; owner, L. A. Benteling; architects, Hermann & Swain; contractor, R. J. Pavert; signed, Oct. 16; filed, Oct. 16; cost $7846.

Bush near Laguna. To build; owner, Michael McGrath; architect, M. J. Welsh; contractor, J. W. Coburn; signed, Oct. 2; filed, Oct. 22; cost $3600.

Cherubusco near Cortland Ave. One-story frame; owners, Margaret and Edward Fekey; architect, Vincent Krolow; contractor, L. B. Schmid; signed, Oct. 1, filed, Oct. 5; cost $1075.

Clay near Van Ness. One-story banquet room, cabinet work excepted; owner, L. Schwabacker; architects, Percy & Hamilton; contractors, Farrell & Bell; signed, Oct. 22; filed, Oct. 22; cost $1100.

Clay near Stockton. Three-story brick; owner, Pacific Fruit Co.; days work; cost $10,000.

Clay near Drumm. Grading, concrete and brickwork for two-story brick; owners, G. H. and Alvina Lucksinger, et; architect, H. Geilfuss; contractor, F. Wagner; signed, Oct. 22; filed, Oct. 23; cost $4839.

Clay near Drumm. Piling, foundation, etc; owner, G. H. and Alvina Lucksinger and others; architect, H. Geilfuss; contractors, Thomas Day & Sons; signed, Oct. 22; filed, Oct. 23; cost $3273.

Clayton near Waller. Two-story frame; owner, T. J. & Anne Sheehan; contractor, D. Ross; signed, Oct. 18; filed, Oct. 19; cost $3296.

Devisadero and Post. Plastering, etc.; owner, John W. McDonald; architects, Havens & Toepke; contractors, Clark & Kelley; signed, Oct. 29; filed, Nov. 2; cost $1300.

Eleventh Ave. near L. street. Alterations and additions; owner, Eugene Legallet; architect, E. Depierre; contractor, L. Perramont; signed, Oct. 11; filed, Oct. 18; cost $2100.

Ellis near Jones. Concrete and cement work; owner, Joseph Hume; contractors, Cushing, Wetmore Co.; signed, Oct. 8, filed, Oct. 24; cost $2350.

Fell near Lott. Two-story frame; owner, J. F. English; architect, J. V. Hall; contractor, F. W. Kern; signed, Oct. 23; filed, Oct. 29; cost $1340.

First Ave. near Point Lobos. School Building; owner, City of San Francisco; architect, C. I. Havens; contractor, W. Linden; cost $2866.

First Ave. near Point Lobos. Water closets and drainage; owner, Board of Education; architect, C. I. Havens; contractor, W. Linden; signed, Nov. 1; filed, Nov. 5; cost $2866.

Fillmore and Lombard. Lathing, plastering, etc.; owners, Henry and Martin Rathjen; architect, Henry Geilfuss; contractor, Arthur O'Brien; signed, Nov. 6; filed, Nov. 11; cost $1099.

Fillmore and Lombard. Carpenter and mill work for three-story frame; owner, Henry and Martin Rathjen; architect, Henry Geilfuss; contractor, Jacob Schuler; signed, Oct. 10; filed, Oct. 10; cost $7738.

Fillmore and Lombard. Plumbing, gas fitting; etc.; owners, Henry and Martin Rathjen; architect, H. Geilfuss; contractor, W. F. Wilson; signed, Oct. 10; filed, Oct. 10; cost $341.

Fillmore and Lombard. Excavations, brick work, etc.; owners, Henry and Martin Rathjen; architect, H. Geilfuss; contractor F. Wagner; signed, Oct. 10; filed, Oct. 10; cost $1059.

Fillmore and Lombard. Plastering, lathing, etc.; owner, Henry and Martin Rathjen; architect, H. Geilfuss; contractor, H. L. Helgoth; signed, Oct. 10; filed, Oct. 10; cost $1065.

Franklin and Oak. Alterations and additions; owner, F. A. Meyer; architect, F. B. Wood; contractor, R. O. Chandler; signed, Oct. 29; filed, Oct. 30; cost $1670.

Front and Broadway. Improvements to warehouse; owner, J. McDonough; contractors, Mahoney Bros.; cost $7000.

Folsom near 25th. Three-story frame; owner, Frank Nelson; architect, C. M. Rossean; contractor, A. Petry; signed, Oct. 8, filed, Oct. 11; cost $1940.

Fourth near Bluxome. Two-story frame; owners, Simon and Yetta Israel; architect, J. Biller; contractors, Biller & Qualman; signed, Oct. 14; filed, Oct. 16; cost $2556.

Fourth and Welsh. Excavations; owner, John Shirley; architects, De Prosse & Meusdorffer; contractor, H. M. Peterson & Co.; signed, Oct. 24; filed, Oct. 25; cost $225.

Green near Kearny. To build; owner, J. S. Godeau; architect, J. Godart; contractor, A. Petry; signed, Oct. 26; filed, Nov. 4; cost $2000.

Harrison street No. 405. Two-story addition; owner Emma Hare; contractor, W. J. Keathing; signed, Oct. 22; filed, Oct. 23; cost $1420.

Jackson and Sullivan Alley. Repairs; owner, W. Vrooman; contractor, J. F. Hills; cost $5000.

Jackson near Hyde. Alterations, except plumbing; owner, S. Polack; architect Salfield & Kohlberg; contractors, Bratcher & Griffith; signed, Oct. 21; filed Oct. 25; cost $1800.

Jackson near Baker. Two-story frame; owner, Eleanor Howell; architect, R. H. White; contractors, Campbell & Pettus; signed, Oct. 23; filed, Oct. 26; cost $5140.

Laurel Hill Cemetery. Vault; owner, O. F. Willey, ex. estate of J. Wheeland architects, Townsend & Wyneken; contractor, M. F. Redmond; signed, Oct. 9; filed, Oct. 11; cost $1275.

Laurel Hill Cemetery. Granite and marble vault; owner, F. M. Husted; contractor, Rocklin Granite Co.; signed, Oct. 10; filed, Oct. 12; cost $3175.

Laguna and Jackson. Tile work for five bath rooms; owner, W. F. Whittier architect, Edward F. Swain; contractor, Montague & Co.; signed, Nov. 1 filed, Nov. 7; cost $1058.

Market near 5th. Plastering work; owner, Mrs. A. M. Parrott; architects Pissis & Moore; contractor, A. C. McTavish; signed, Nov. 5; filed, Nov. 7 cost $1000.

Market near 5th. Floor tiling; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, T. F. Rigney; signed, Oct. 7; filed, Oct. 19; cost $2000.

Market and 6th. Alterations; owner, D. Hewes; architect, S. Newsom; contractors, Ackerson & Paterson; cost $1000.

Market and 10th. All work for reconstruction of brick building; owner; Timothy Hopkins, architect, H. A. Schulze; contractors, Ingerson & Gore. signed, Oct. 29; filed, Nov. 4; cost $11,000.

Market near Noe. Three-story frame; owner, Josephine W. Cory; architect, Seth Babson; contractor, James A. Smilie; signed, Sept. 30; filed, Oct. 23; cost $4920.

Mason and Greenwich. Retaining walls, etc.; owner, Catherine Dondero; architects, Havens & Toepke; contractor, W. F. Ambrose; signed, Oct. 22; filed, Oct. 24; cost $3250.

Mason near Jackson. Alterations; owner, J. H. Drossel; architects, Kenitzer & Barth; contractor, C. Kreeker; signed, Oct. 19; filed, Oct. 19; cost $1677.

Mission and Ribley. Alterations and additions; owner, P. C. Casey; contractor, Jas. Maguire, signed, Oct. 19; filed, Oct. 19; cost $1230.

O'Farrell near Stockton. Fire proof partitions; owners, Gutzeit & Malfanti; architects, Pissis & Moore; contractor, H. Balston; signed, Oct. 11; filed, Oct. 15; cost $1187.

Page and Buchanan. Alterations and additions; owner, Mary J. Keane; architects, Percy & Hamilton; contractor, B. F. Ellis; signed, Nov. 5; filed, Nov. 7; cost $7931.

Page and Buchanan. Plumbing, gas pipe, etc.; owner, Mary J. Keane; architects, Percy & Hamilton; contractors, W. S. Snook & Son; signed, Nov. 5; filed, Nov. 7; cost $1230.

Page near Broderick. Two-story frame; owner, John Muller; architect, W. H. Lillie; contractor, J. H. Moore; signed, Oct. 19; filed, Oct. 23; cost $3233.

Parker Ave., lots 8 and 9. Frame building; owner, T. Alborn; contractor, Jos. Heaney; signed, Oct. 30; filed, Nov. 4; cost $2040.

Pine near Gough. Alterations and additions; owner, Mrs. M. J. Morffew; architect, M. J. Lyon; contractors, Fenn & Weste; signed, Oct. 15; filed, Oct. 31; cost $1300.

Pine and Central Ave. Alterations and additions; owner, Joseph Beyersdorf; contractor, E. Roettger; signed, Oct. 14, filed, Oct. 16; cost $2360.

Point Lobos and 1st Ave. Two-story frame, except mantels and gas fixtures, owner, F. M. Flugger; architect, C. F. Robinson; contractor, E. A. Priest; signed, Oct. 9. filed, Oct. 11; cost $3790.

Potrero Ave. and 21st. Cottage; owner, Alexander Tillie; contractor, R. W. Smith; signed, Oct. 15; filed, Oct. 17; cost $1775.

Post near Broderick. Alterations and additions; owners, Julius and Mary Heyman; architect, Henry Geilfuss; contractor, C. Schutt; signed, Oct. 21; filed, Oct. 21; cost $1140.

Post and Devisadero. Planning mill work; owner, J. W. McDonald; architects, Havens & Toepke; contractors, C. M. Depew Planing Mill Co.; signed, Oct. 17; filed, Oct. 25; cost $2800.

Post near Scott. Two-story frame; owner, Samuel Solomon; architect, M. J. Lyon; contractor, Hienrick Pauls; signed, Oct. 18; filed, Oct. 30; cost $3300.

Sacramento near Steiner. Two-story frame; owner, Charlotte E. Blyth; contractor, Richard Cook; signed, Oct. 9; filed, Oct. 10; cost $4100.

Scott near Pacific Ave. Two-story frame; owner, Millie L. Wright; architect, W. H. Lillie; contractor, J. G. Adams; signed, Oct. 25; filed, Oct. 29; cost $10,666.

Scott near Pacific Ave. Plumbing, gas-fitting, etc.; owner, Millie L. Wright; architect, W. H. Lillie; contractor, W. F. Wilson; signed, Oct. 26; filed, Oct. 26; cost $1162.

Seventeenth Ave. near K. N. W. Alterations and additions; owner, David Paul; contractor, John T. Coleman; signed, Nov. 2; filed, Nov. 5; cost $1530.

Sixth and Folsom. Additions and new three-story frame; owner, M. Israel; architects, Salfield & Kohlberg; signed, Nov. 5; filed, Nov. 6; cost $8350.

Steiner near Broadway. Two-story frame; owner, Pauline Bachman; architect, M. J. Lyon; contractor, H. Jacks; signed, Oct. 5; filed, Oct. 12; cost $5350.

Steiner near Hayes. Two-story frame; owner, M. Kavanagh; days work; cost $5000.

Steiner near Hayes. Two-story frame; owner, M. Kavanagh; days work; cost $8000.

Silver near 3d. Six flats; owner, Thomas Clark; cost $5000.

Stuart near Mission. Excavating, piledriving, etc.; owner, E. R. Lilienthal; architect, Clinton Day; contractors, S. F. Bridge Co.; signed, Nov. 7; filed, Nov. 11; cost $3400.

Sutter and Jones. Wood and metal lathing patent plaster; owner, Dr. M. Herzstein; architect, M. J. Lyon; contractors, Spencer & Tobin; signed, Oct. 17; filed, Oct. 28; cost $3000.

Sutter and Jones. Painting, etc.; owner, Dr. M. Herzstein; architect, M. J. Lyon; contractors, Enat & Ellert; signed, Oct. 16, filed, Oct. 25; cost $2500.

Union near Devisadero. Mill work; owner, Mrs. May B. Angus; architect, J. H. Littlefield; contractor, O. E. White; signed, Oct. 4; filed, Oct. 11; cost $1710.

Twelfth Ave. near California. Water closets for school house; owner, Board of Education; architect, C. I. Havens; contractor, William Linden; signed, Nov. 1; filed, Nov. 5; cost $3753.

Twenty-second and York. Two-story frame; owner, Anton Halbritter; architects, Martens & Coffey; contractor, H. Helbing; signed, Oct. 16; filed, Oct. 16; cost $2970.

Twenty-second and Treat Ave. Two and three-story frame buildings; owner, Charles Groezinger; contractor, W. W. Rednell; signed, Oct. 31; filed, Oct. 31; cost $9000.

Twenty-second street No. 217. Additions and alterations; owner, Mary Pendergast; architects, Martens & Coffey; contractor, James Mooney; signed, Nov. 5; filed, Nov. 7; cost $1020.

Twenty-third near Mission. Two-story frame; owner, Niles Thompson; architect, M. J. Welsh; contractor, J. W. Coburn; signed, Oct. 9; filed, Oct. 9; cost $1700.

Twenty-fourth and Sanchez. Additional story; owner, R. E. Eckles; carpenter, John Blake; raising, etc., A. T. Penebsky; cost $2000.

Twenty-eight near Dolores. One-story frame; owner, Geo. W. Kennard; contractor, O. W. Forsyth; signed, Oct. 28; filed, Nov. 6; cost $1600.

Van Ness Ave. Boat house for Dolphin boat club; owners, Dolphine Boat Club; architect, A. C. Lutgens; contractor, W. Linden; cost $1490.

Van Ness Ave. Bulkhead and granite steps; owner, F. A. Frank; architect, Clinton Day; contractor, Dan'l M'Phee; signed, Oct. 28; filed, Nov. 7; cost $1050.

Waller near Laguna. Additions to Engine House; owner, City of San Francisco; architect, C. Wilson; contractors, Holm & Sheibley; cost $5342.

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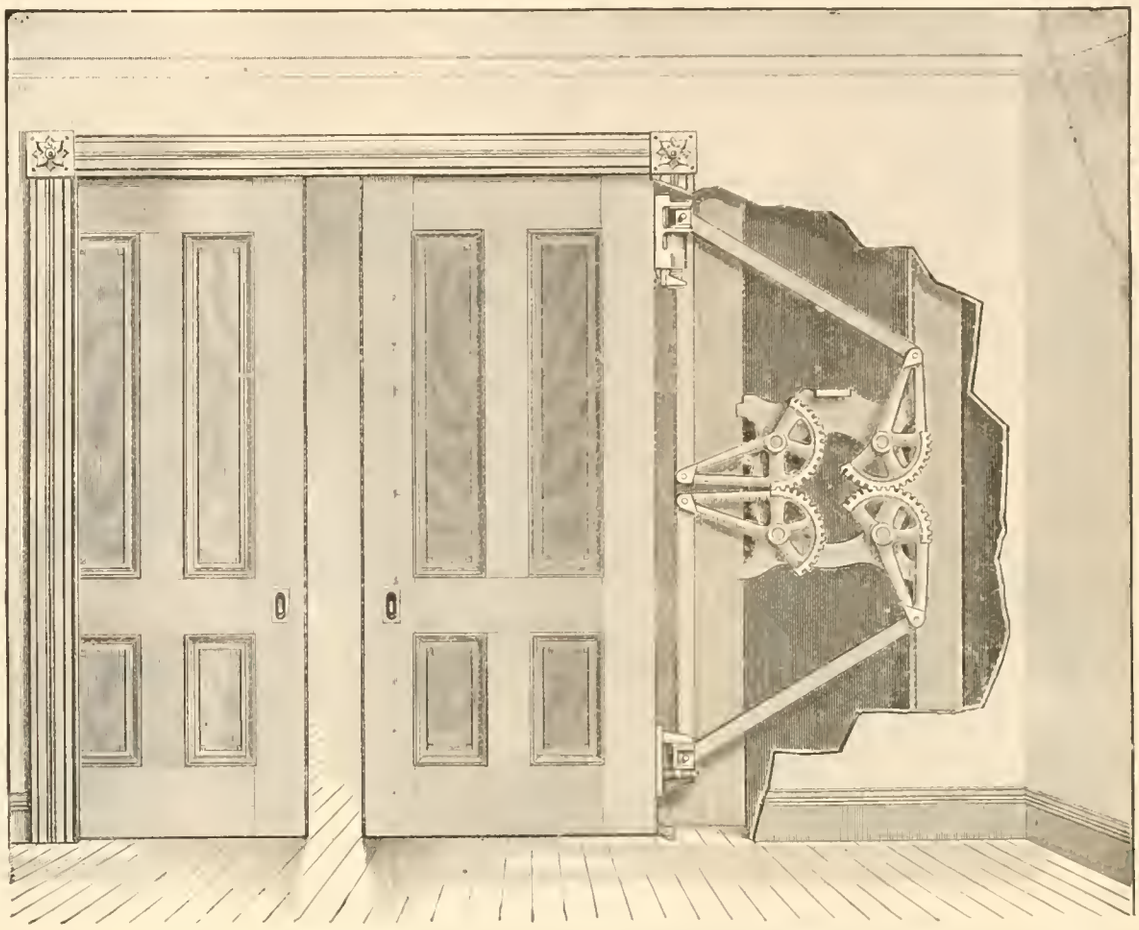

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A. I. Sanborn vs. L. Morrison; Montana near Plymouth; $30.

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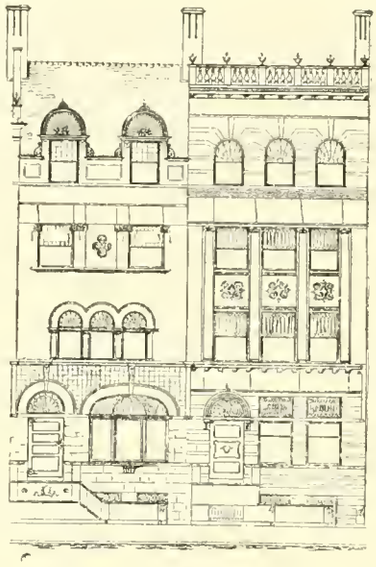

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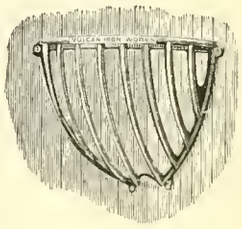
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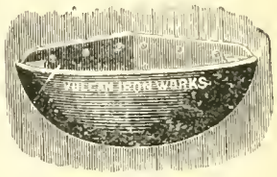

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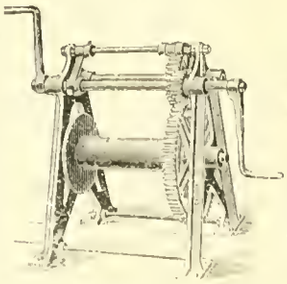

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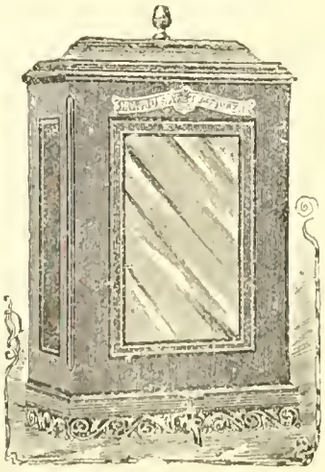

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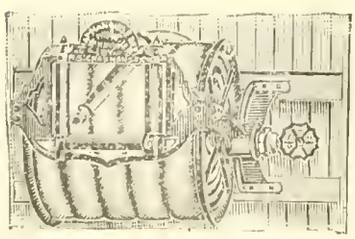

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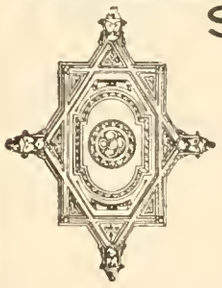

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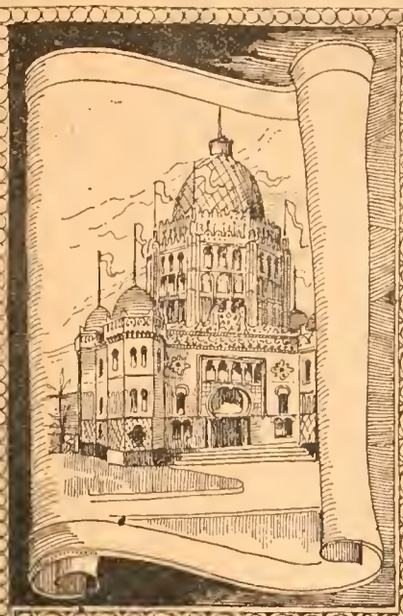

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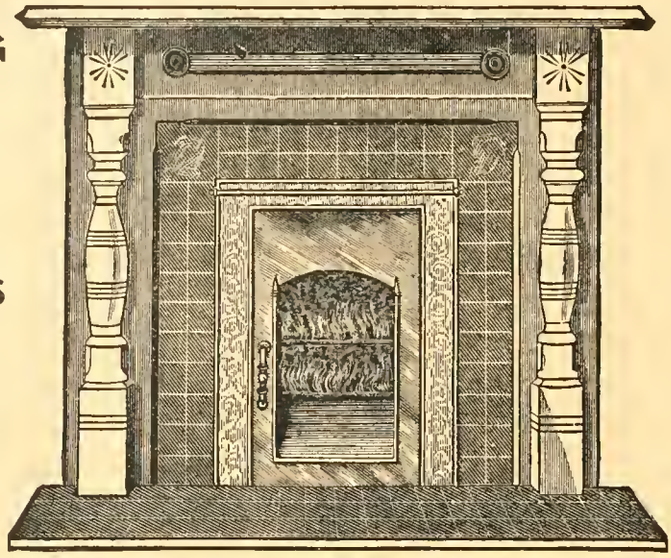

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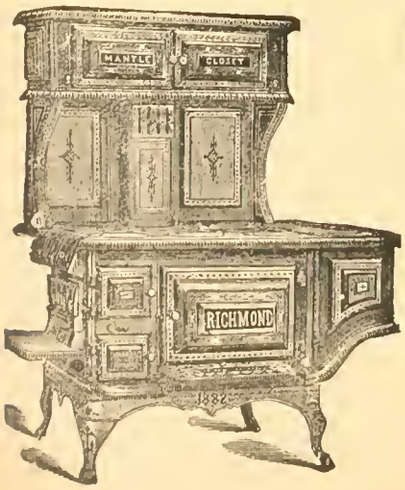

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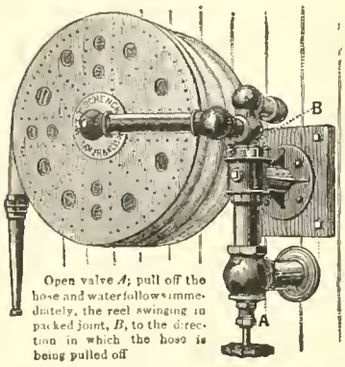

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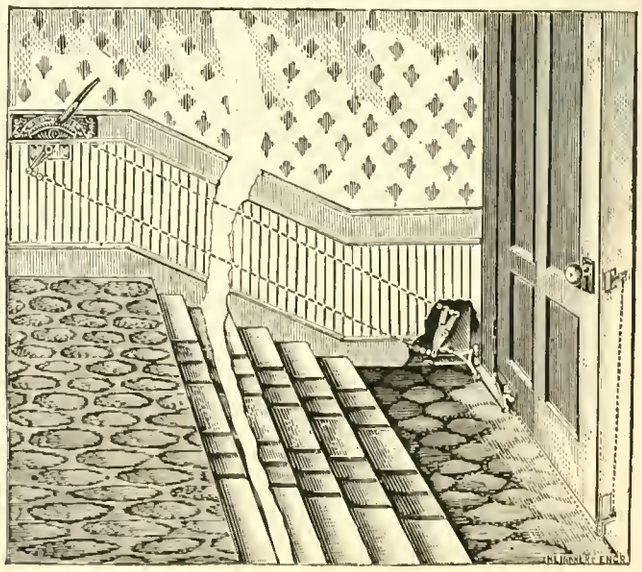

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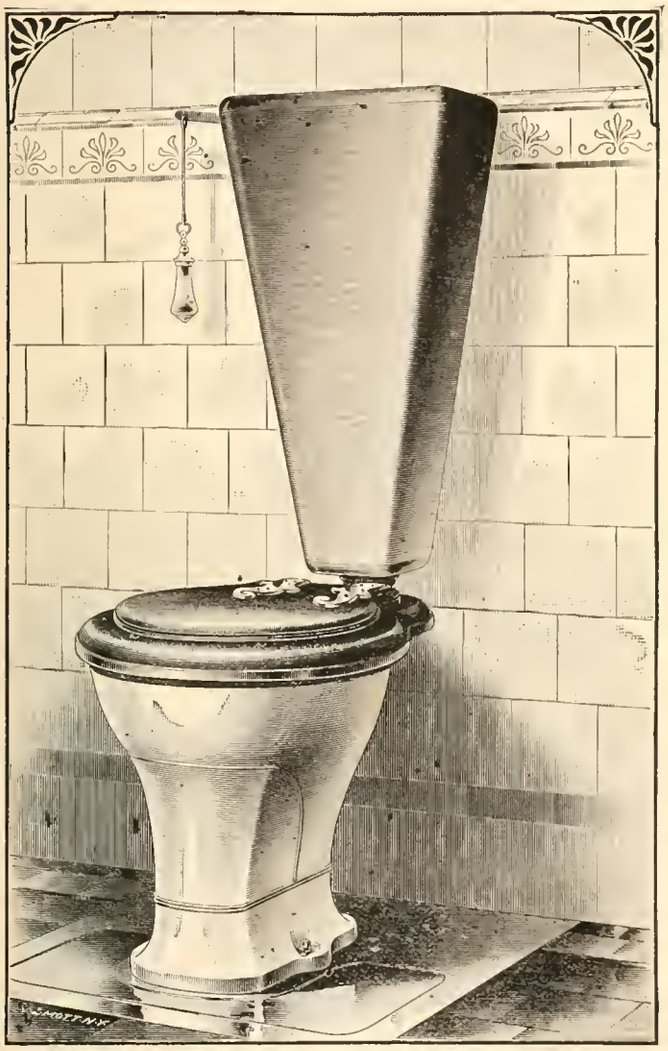

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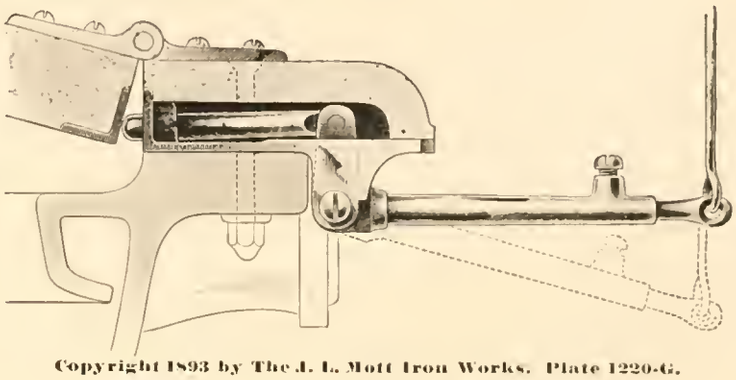
The ordinary Cistern Closet cannot always be advantageously used—a window may interfere or a shelving roof, or the water supply may not rise sufficiently high. Again if the Closet is to be placed under a stairway the height is usually limited. Put up under these conditions the "Descendo" answers all practical and sanitary requirements, besides being neat and attractive in appearance. In operation it is quick and thorough and SUBSTANTIALLY NOISELESS, making it particularly desirable for use in compartments adjoining drawing rooms, etc. The Cistern has a close fitting cover, so that in filling there is absolutely no noise.

Each closet is furnished complete as shown. No Flush Pipe is required, the outlet at bottom of Cistern connecting directly with the inlet of the Closet.



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MOTT'S "PERFECTO" AUTOMATIC SEAT.

PATENTED; OTHER PATENTS PENDING.

Automatic Water Closets have heretofore been arranged either with Weights, Brackets fixed to Wall, or Legs, all more or less objectionable.

The "Perfecto" Automatic Seat is attached directly to the Closet, the Lever, or operating mechanism, being set in motion by the moving part of the Seat. When the Seat is depressed, it forces the lever downward; when the Seat is relieved the lever resumes its normal position and about three gallons of water descend and flush the Closet. There is practically no strain or friction to affect the perfect working and durability of the apparatus.

The Closet may be used as a Urinal by lifting the Seat, the raised Porcelain at the back preventing any water or dripping passing behind the bowl, and at the same time affording a strong support for the Seat.

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MOTT'S PATENT BATH SEAT AND HEAD REST.

Plate 1361-G, consists of two Nickel-Plated Clamps engaging the rim of the tub, and connected by a flexible band five inches wide. This band can be slipped back and forth through each clamp to attain any desired height of Seat or Rest, and when adjusted is held firmly in place. It thus makes an admirable Seat, being soft and flexible, and the same is true of it as a Head Rest.

Parties desirous of seeing these Articles, as well as other Sanitary Specialties, are invited to call at the Show Rooms of the J. L. Mott Iron Works, Room 27, Flood Building, San Francisco, where all information and circulars will be furnished.

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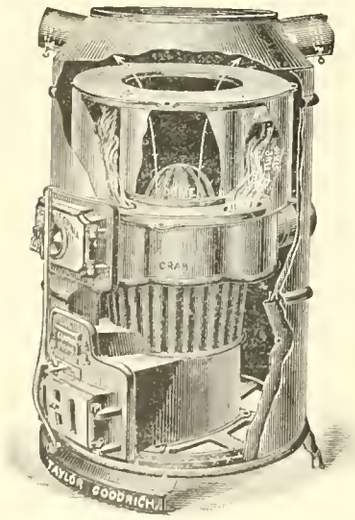

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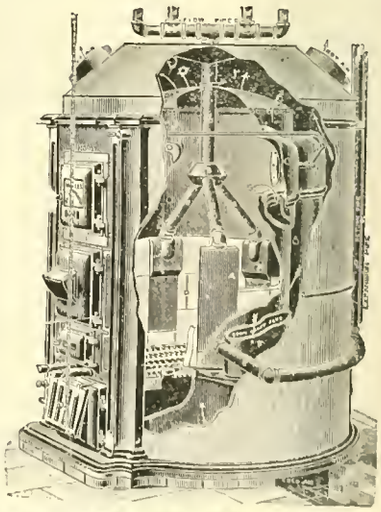

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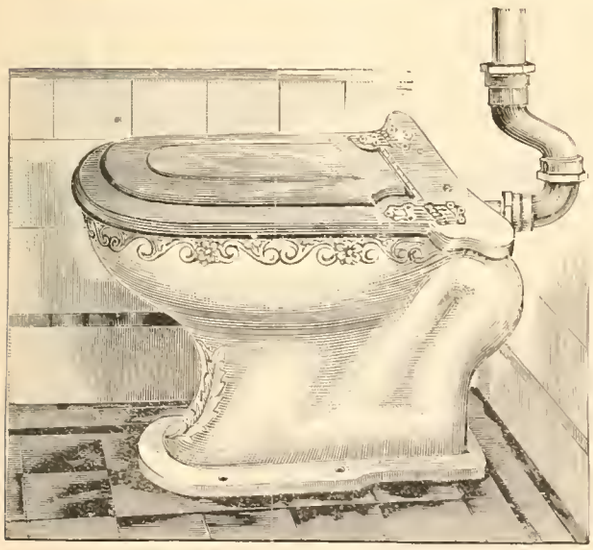

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NOTICE TO ARCHITECTS.

Officers of the COMMISSIONERS OF FAIRMOUNT PARK, CITY HALL, Rooms 127-129. PHILADELPHIA, April 10, 1895.

PLANS AND SPECIFICATIONS will be received by the Commissioners of Fairmount Park until 12 M., October 1, 1895, for an ART BUILDING to be erected in Fairmount Park.

The Commissioners of Fairmount Park will award the following prizes for the various successful plans, namely:—

1st Prize—Six Thousand Dollars [$6,000] for the plans and specifications of the building that shall be adopted.

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3d Prize.—Two Thousand Dollars [$2,000].

4th Prize.—One Thousand Dollars [$1,000].

Plans and specifications must be complete in all respects, and must comply with the general requirements and specifications that may be obtained by application to the undersigned.

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NOW IN THE SIXTEENTH YEAR.

W. J. CUTHBERTSON, President. OLIVER EVERETT, Secretary.

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ONCE more the inquisitive San Francisco newspaper has inquired of the Treasury Department why we have not seen that new postoffice building on the lot purchased for it some years ago, and once more we have been told that we must be patient. Now patience is a virtue, and to be virtuous is to be happy, so San Francisco should consider herself happy, and really she ought to be. There are no joys so pure as the delights of anticipation—and really we have been greatly favored in that respect; what will the sordid reality in brick and stone compared with the delightful visions of our active imagination.

A young lady who was asked why she was always so happy and contented replied as follows: "Why ever since I was a little girl, my father has been promising me a sealskin sack for Christmas." "But," replied her friend "you have never received it!" "No, but every Christmas father promises to send me to enjoy my summer vacation in the country if I will forego the sack, so I am always contented and happy!"

But it ts really a serious question that the public business of this nation should be so carelessly administered. Just now we are aware that Uncle Sam is too poor to do his business in a business like manner, he even has to borrow some hundreds of millions to keep up his credit, and really you see under such conditions it would be too extravagant to employ a competent architect as a private individual would do, under like circumstances. O no! just think how much more economical it is to employ a few draftsmen in place of an educated architect, who has the presumption to ask five per cent for his services! and he even cannot employ enough draftsmen to do the work when it should be done. "No, let the people wait a while longer; there are a few corporations waiting for pecuniary favors; there are a few millions in interest on money lent to railroad corporations, that the corporations want us to pay, (to say nothing of the original debt) and then I must pay a little attention to passing a few laws for other corporations."

Now the truth is the corporations practically govern this country. There is no use in shutting our eyes to the dismal fact that that we are no longer a free people, for we are not! A President harrison recommends a postal telegraph for the benefit of the people of the United States; a wannamaker attempts to carry the recommendation into execution, and it is whispered that a JAY GOULD will tell them to stop, and THEY STOP!

A Standard oil is accused of electing a Senator by bribery and the Senate of the United States declines to hear any

evidence in the case, a Collis P. wants an extension of time, and a few people think he won't get it—but how many?

If this country is to become the great nation its founders hoped, it will have to change its laws to give the honest mass of the people a chance to legislate directly, without the interference of elected representatives. The only way to do this is by the Initiative and Referendum.

STONE from sundry quarries and their comparative merits have come to the fore lately in San Francisco, as there are at least three large public buildings to be at once commenced in that city. Any building for the public use should have expended on it, as well as the best talent, the best material obtainable; irrespective of State or even National lines. We want the best wherever it comes from, but when within a State there is found material of as good quality as any outside, it becomes then the duty of its representatives to select such.

In the matter of building stone there is as good as any obtainable in California so that there is no reason in going outside of that State for stone for our New Ferry Building or for any other of our prospective public buildings. It would be invidious to name any particular quarry when there are so many good ones scattered throughout the length and breadth of the State of California—and some within a very few miles of the site.

Proper economy points therefore when there are many quarries of stones of equal strength to choose that which most economizes labor in working and in transportation.

WE see with some concern that the abandonment of Buena Vista Park in San Francisco is broached. It is to be hoped that the Park Commissioners have no serious desires in that direction. A closure of any open space belonging to any city is an economic mistake.

The tendency now-a-days is to more municipal control not less, and by no means let a tittle of the City's property be given up. Once San Francisco did this in the case of Yerba Buena Park and has regretted it ever since.

Buena Vista Park is situated on the top of a hill which is useless for residence purposes except by a great expense in grading. The picturesque steep places which now adds to its beauty would be in the way of streets and residences. In truth all of the tops of the hills of the city should be acquired by the municipality for park purposes, should be planted out with trees to form wind breaks and clothing, and crowned by obelisks or other monuments perpetuating the memory of some heroic action or person.

This idea being adopted, no more will the artistic eye be tortured as it gazes on the glories of the setting sun in the Golden West, by having its gaze arrested by the hideous outlines of chimney sweep's and clothier's advertisements which now crown the terminal points upwards of the City's landscape which under better conditions would finish with its natural grandeur and solemnity the Vista of its main street.

TWENTY-NINTH ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS.

CONTINUED FROM NOVEMBER NUMBER.

THE general purport of Section X in its amended form is this: Taking it for granted that it is desirable to increase membership in the Institute, and that there are certain architects who for one reason or another desire to obtain such membership while they do not care to acquire active membership in the nearest Chapter, the amended Section X allows such Chapters as may so desire to establish a second-grade of Chapter membership at half the usual dues of such Chapter, whatever they may be. The payment of such half dues assures to the members paying them no vote in control of the Chapter's actions; it is only an enabling step which will allow the members to then seek admittance to the Institute itself under the usual conditions and stipulations and upon payment of the full initiation fee and annual dues, as now. Entrance to the Institute can still only be obtained through the Chapters, except in cases of isolation as now, and except that the Directors, in their discretion, may elect to direct membership in the Institute any architect who for twenty years had honorably practised his profession.

In order to prevent this "half-grade" membership from being deterimental to the Chapter, it is provided that if such member at any time resigns from the Chapter he, *ipso facto* resigns also from the Institute, and on the other hand resignation of such half-grade Chapter member from the Institute carries with it resignation from the Chapter. Moreover it is anticipated that as all are more closely and more naturally interested in the local matters these half-grade Chapter members will not be content to be mere onlookers, but will sooner or later wish to have a voice in their control and will so become full members of the Chapter as well as of the Institute, even if it does entail a slight additional expense.

To these and other slight verbal changes in Section X was added a clause of possible usefulness but containing so large a germ of contention that it is remarkable that it should have been adopted. This new clause empowers the Directors to issue a charter to a new Chapter for a territory which is either wholly or partially occupied by an existing Chapter and covered by its charter. Action of such nature can be taken by the Directors only after consulting the wishes of the Chapter first in the field and weighing the value of the arguments it may prefer against the invasion of its territory; but if the Directors consider the advantage to accrue to the Institute itself through the dual occupation of the territory sufficient to outweigh the objections of the elder Chapter, they can grant the second charter in spite of the opposition, and the invaded Chapter seemingly has no right of appeal to any one.

With the exception of this last-mentioned measure the amendments were all very desirable ones and are so carefully considered that no Chapter right is lessened or invaded, while they offer the chance of a great material benefit to the Institute itself. Probably the trouble that is dormant in the clause relating to dual charters may never declare itself, since the President stated that his two years' observation of the working of the Directors had shown him that in cases of uncertainty the Board inclined more toward inaction than to hasty action.

Aside from the reports of the standing committees and

the opening address, the entire day was consumed by the discussion of the amendments to the By-laws.

In his opening address Mr. Burnham developed at least one important and interesting suggestion. He said he felt that it was full time that the Institute had its own proper and respectable quarters, not merely a room or suite of rooms, but a building of proper architectural character erected in some city—presumptively, New York—owned and controlled by itself and in which it could have not only its meeting-rooms and library, but also have a "memorial room" in which could be safely gathered and exhibited memorials and portraits of distinguished members of the profession and such of the original drawings of their important works as it is really desirable to preserve. Under present circumstances such drawings and records, on an architect's death, are left to the generally inappreciative care of his heirs and are destroyed, injured or mislaid and lost sight of sooner or later, and in this way valuable personal and professional data are made absolutely unproductive of good. This condition of things seemed to be not only wrong, but needless. These data should be secured by the Institute and placed in a memorial room in a fire-proof building, and he felt not only that such a building should be built but that it could be built.

When he had committed himself by this rather ambitious suggestion, it might have been expected that he would explain how easy it would be to gather together a syndicate who, using the Institute as a nucleus and bait, should proceed to erect an office-building and lease office-room to dealers in building-supplies and to those who are always seeking for well-lighted studios; that by doing things in this purely business way the undertaking of providing a home for the Institute could be safely and economically undertaken. But not at all! Such a scheme as this was far from Mr. Burnham's thought. He at once made it plain that he had conceived the project from the highest conceivable point—that he believed that it would be possible for the Institute to have built for it by the wealthy friends of Art, a building which should be purely devoted to administering to the real need and requirements of architecture as represented by the Institute, a building that should be a worthy memorial of the architects who have gone before and a true record of the best that American architecture is capable of accomplishing at the close of the nineteenth century.

It is an interesting and audacious suggestion, but not by any means one which cannot be carried out, and the Convention appointed Messrs. Burnham of Chicago, Post of New York and Warren of Boston, a committee to carefully consider the suggestion and devise a consistent scheme of procedure.

Mr. Stead, of Washington, said he believed that it would be entirely possible for the Institute to procure at least the temporary use of a suitable room for the storage and display of its valuable collections in the new Congressional Library Building.

The futility, the uselessness of much of the cumbrous machinery that associations of all kinds find it necessary to maintain through a blind respect for traditional methods, although the existence of this useless machinery is the cause of the constant tinkering which annual conventions of all kind waste their time over, was beautifully shown by the report of the Standing Committee on Foreign Correspondence. Mr. Jenney reported that he had found the greatest difficulty in finding out where the records of foreign correspondence were and who had them. Having at length hunted them down, he proceeded to acquaint himself with his new duties by a study of these recovered archives, but found that they consisted of copies of a single letter written in 1874 and a second letter in 1884, and that as the periodicity of these foreign communications was already exceeded, he would be very much obliged if any one would instruct him as to who should be the recipient of the overdue decennial letter. Yet, the Convention in place of abolishing this committee has gravely continued it in office. Is the honor of filling a wholly useless office really of any value to any one?

The Committee on Uniform Contract was, however, discharged.

The report on Proportionate Representation of Chapters was not forthcoming and this matter therefore, received no consideration. Neither was it possible to take any action on the proposed change in the Constitution, because not enough members had forwarded their letter-ballot. The Convention authorized the Secretary to issue a new letter-ballot in a hope that a decision might, at length, be reached.

There was practically nothing in the way of business to come before the Convention on the second day, and the morning was in the main occupied by the reading of two very interesting papers of very similar character, and both inferentially expressing a feeling of yearning and dissatisfaction. Both contained abundant good suggestions, and afforded ample food for consideration and discussion—too ample, in fact, for when those who had listened attentively began to express their views on what they had heard they spoke with unusual timidity, as if they were not sure that they understood just what the writer of the papers really recommended that the Institute should attempt to do.

As the text of these papers is not before us at the moment, we confess to the same doubt as to the precision of our recollection of the nature of the recommendations actually made, so it is not possible to discuss them here. The papers will be published in full, and more than this, their subject matter is positively assigned for full consideration next year, the matter being brought up by the report of a special committee, consisting of Messrs. Clay, Patton and Sullivan, of Chicago.

The rather important attempt that was made to discuss the matter on the floor, not only revealed the uncertainty of mind we refer to, but also showed that, if continued, the discussion would inevitably wander over so wide a field that a great amount of time would be consumed in reaching decisions upon many of the points which had been made by the writers. The Convention, therefore, wisely concluded that the proper course would be to refer these papers to a committee. This committee, however, is not to consider the matter and make a report of the views which its unassisted wisdom enables it to prepare: it is instructed to seek advice and suggestion from every quarter and then to collate, compare and digest the suggestions they may in this way receive and submit a full report in print thirty days before the assembling of the next convention. As this committee is expected to have abundant work to do, it was thought best that its members should all reside in the same city, so that they might have easy and proper meetings for discussing their work.

As the next Convention is to be held at Nashville—at the urgent invitation of Mr. W. C. Smith, backed by the Mayor, the centennial exhibition authorities, the Governor of the State and sundry other officials of prominence—and

as Nashville has but little to tempt architects to travel long distances, it is not unlikely that this report, which may be important and may recommend radical and even violent organic changes, may be discussed and acted on by only a small number of the members of the Institute, and this, it seems to us, would be possibly very unfortunate.

This possibility emphasizes in a fresh way the desirability of a permanent house for the Institute, to which all would soon form the habit of restorting, as a matter of course and annual accurrence. The chance wisdom of the past peripatetic assemblages might be expected than to give way to the consistent and sustained policy of those men who have the welfare of the profession sufficiently at heart to take part in the guidance of thought and action at other times than those irregularly occurring seasons when a convention chances to be held in the city of their residence.

The evening was made truly memorable by Mr. Van Brunt's tender and feeling eulogy of Mr. Hunt, his life work and the influence he has had not only on the architecture of this country, but still more upon its architects. How great this influence was we imagine Mr. Hunt never suspected until the coalition convention of Cincinnati took place. At that time, it may be remembered, that a letter from Mr. Adler was read in which he stated fully, frankly and persuasively the strong belief he felt that Mr. Hunt was the one man best fitted for the presidency of the reorganized Institute. The unexpectedness and the delicacy of the tribute was too much for Mr. Hunt, and breaking down absolutely in his attempt to say a word or two—perhaps the only time in his life when words failed him—he could only bury his face in his hands and sob like an hysterical woman.

Mr. Van Brunt was followed by Mr. Post, Mr. Kendall and Mr. Ferry, but Mr. Van Brunt's words hardly required endorsement or strengthening.

Between the morning and the evening session the local Chapter, according to custom, conducted their visitors in coaches and carriages through the new residence portion of the city and the beautiful natural Forest Park. To Eastern men this excursion was a surprise and a revelation. Almost all had expected to find a flat and uninteresting prairie country, so far as its natural characteristics were concerned, with here and there some piece of interesting architecture; but none of the Eastern men were at all prepared for the varied character of the natural scenery nor for the very great amount of interesting and refined work that the younger architects of St. Louis have been doing in the last few years.

The drive was interrupted at several points: first, to examine the extremely interesting group of improved warehouses, known as the "Cupples group," which have been devised and carried out by Messrs. Eames & Young in such a way that not only have the wholesale grocery and hardware trades of St. Louis been revolutionized, but the city has been endowed with an architecturally monumental group of buildings. The second stop was at Washington University, where Professor Johnson had prepared some tests on full-sized wooden beams and posts. Very few, probably, carried away with them any remembrance of the figures which resulted from the test, but all have a vivid recollection of how the beam broke down and the post crimped up under the enormous strain, which was enough even to force the oil through the five-inch cast-steel wall of the cylinder. The final stop came at the Columbian Club-house, designed by Mr. A. F. Rosenheim, where all, having first washed off the soot—the only one disagreeable feature of the visit to St. Louis—sat down to one more of the "lunches" with which the visitors have been so bountifully provided.

The ballot for officers on the last day resulted in the election of George B. Post, of New York, President; Henry Van Brunt, of Kansas City, First Vice-President; Wm. C. Smith, of Nashville, Second Vice-President; Alfred Stone, of Providence, Secretary; S. A. Treat, of Chicago, Treasurer; and D. H. Burnham, of Chicago; J. W. McLaughlin, of Cincinnati, W. S. Eames, of St. Louis, C. F. McKim, of New York; F. M. Day, of Philadelphia; N. S. Patton, of Chicago; R. D. Andrews, of Boston, as Directors for three years. Mr. W. R. Briggs, of Bridgeport, was elected a Director vice Van Brunt promoted.

Mr. Berg's paper on discoloration of plaster elicited more practical discussion than any that was read, Mr. Post, in particular, drawing upon his large experience for the benefit of those present. He said that the new asphaltic material, described by Mr. Berg, might prove to be a very useful thing, but that he had been advised by Mr. Theodore Cooper that while asphaltic compounds could be safely used in dry places, they oxidized rapidly in the presence of moisture. For himself, he believed that so far as the protection of iron went—for which Mr. Berg had suggested the new compound might be used—he believed there was nothing better than simple boiled linseed oil mixed with a little lamp-black, or better still, with a little chrome yellow, as this latter material would make it easier to discover imperfections in the protecting coating. Next to this, finely-ground graphite in boiled linseed oil mixed with a pure Japan varnish for a dryer, he had found most desirable. Unfortunately, the best coating of all, pure red-lead in oil, could not be used, because it set with such rapidity. In all cases, no matter what covering material was used, the first consideration was to thoroughly clean the iron and then to use plenty of muscle in brushing on the oil.

Mr. Bullard's paper on the Woods of Washington brought out a protest from Professor Johnson, who declared that the tests quoted were imperfect in character and the results misleading, worthless and mischievous. As the time for final adjournment had arrived, the Chair had to cut the discussion short and invited Professor Johnson to reduce his remarks, made and unmade, to writing, that the Institute might have the advantage of their publication in the Proceedings.

After adjournment the visitors were driven to another section of the city and to still another beautiful park, and the break in this trip occurred at the great Anheuser Busch Brewery. Here, too, hospitality declared itself in the form of another lunch, which, naturally, was not served dry.

As the Eastern trains leave late in the evening the thoughtfulness of the hosts was shown by their preventing any of the usual uneasy loitering about in hotel corridors, by taking every one to the theatre. In simple truth, the St. Louis Chapter, by the perfection of their arrangements and the bounteousness of their hospitality has made it very difficult for any Chapter playing the host in the future to equal the record that has been made this year. After all, there is much of real value in the informal proceedings at these annual conventions and it is by no means wasted effort to make them thoroughly enjoyable and attractive.

The apothegm with which Mr. Post acknowledged his election as President was a fitting valedictory. He declared that there were two things that each architect should con-

sider a duty: first, to become, or attempt to become, a member of the American Institute of Architects, and, second, having acquired membership, then to do the utmost in his power to elevate the standard of architectural and professional performance.—*The American Architect and Building News.*

BRICK-DUST MORTAR AS A SUBSTITUTE FOR HYDRAULIC CEMENT.

THE use of brick-dust mortar as a substitute for hydraulic cement, where the latter cannot be obtained, is now recommended; experiments made with mixtures of brick-dust and quicklime showing that blocks of one-half inch in thickness, after immersion in water for four months, bore, without crushing, crumbling, or splitting, a pressure of 1500 pounds per square inch. It is considered too that the addition of even as small a proportion as one-tenth as much brick-dust as sand to ordinary mortars, is preventitive of the disintegration so often characterizing mortars used in the masonry of public works. The use of brick-dust mixed with lime and sand is said to be generally and successfully practiced in the Spanish dominions, and is stated to be in all respects superior to the best Rosendale hydraulic cement in the construction of culverts, drains, tanks, or cisterns and even roofs, whether for setting flat tiles or for making the usual tropical flat roof. The proportions used there in the manufacture are, approximately one of brick-dust, one of lime, and two of sand, mixed together, dry and tempered with water in the usual way.—*Arthur Lee in Stone.*

ASBESTOS.

ASBESTOS is a wonderful substance, says the *Engineer*, The name comes from a Greek word meaning inconsumable. Fire will not burn it; acids will not gnaw it; weather will not corrode it. It is the paradox of minerals, for it is quarried just like marble. The fibres of which it is composed are soft as silk and fine and feathery enough to float on water. Yet in the mines they are so compressed that they are hard and crystalline like stone. Although the substance has been known for ages in the form of mountain cork or mountain leather, comparatively little has been learned as to its geological history and formation. A legend tells how the Emperor of Charlemagne, being possessed of a tablecloth woven of asbestos, was accustomed to astonish his guest by gathering it up after the meal, casting it into the fire, and withdrawing it later cleansed, but unconsumed. Yet, although the marvelous attributes of asbestos have been known for so long, they were turned to little practical use until about twenty years ago. Since that time the manufacture of the material has grown until it can take its place with any of this country. Indeed, so rapid has been its progress and development, that there is almost no literature of any kind on the subject and, to the popular mind, it is still one of those inexplicable things.

Up to the late seventies, nearly all the asbestos used to come from the Italian Alps and from Syria, but one day explorers discovered a rich deposit in the eastern township of Quebec. Companies were formed, and in 1879 the mines were opened. Remarkable as it may seem, however, although the Canadians started factories, in the operation of which they were substantially backed by English capital, it was an American concern, with headquarters in New York, that developed the industry most rapidly. The company has now grown so large that it has branches in nearly all of the large cities of the country, and the machinery used is specially made and peculiarly adapted to the manufacture of asbestos articles. There is also a large number of factories in England. The veins of chrysotile, as the Canadian asbestos is called, are from two to four in thickness, and are separated by thin layers of hornblende crystals. The nearer to the surface the veins run, the coarser are the fibres and the less valuable. The mining is done by the most improved machinery. Holes are drilled in long rows into the sides of the cliffs by means of steam drills. They are then loaded with dynamite and exploded simultaneously in such a way that a whole ledge of flat falls at once. Then the workmen break out as much of the pure asbestos as possible, load it into tubs or trucks, which are hoisted out and run along to the "cobhouse." Here scores of boys are kept busily employed crumbling or "cobbling" the pieces of rock away from the asbestos and throwing the good fiber to one side, where it is placed in sacks for shipment to the factory. The greatest work in connection with the mining of asbestos is in disposing of the waste rock and refuse of the quarry. Only about one twenty-fifth of the material quarried is real asbestos, and the rocky parts have to be carried to the dumps at great expense. As the asbestos comes from the mines it is of a greenish hue, and the edges are furred with loose fibres. The more nearly white asbestos is the better its grade. The length of fiber is also of great importance, the longest being the most valuable. From the mines the asbestos is taken to the manufacturies in the United States.

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LEGAL DECISIONS.

From a large number of Legal Decisions of the higher Court, of the different States of the Union, we select and publish in this column, such as appear applicable to this section of the country.

MECHANICS' LIEN.—A memorandum of contract filed in the Recorder's office is wholly insufficient when it does not contain "a statement of the general character of the work to do done" when such a statement is required by the statute, and a mere reference to the plans, drawings and specifications, which are neither set out or filed, nor any attempt made to set out their contents or character, does not comply with the statute and the contract is void, so far as a lien is concerned.

Wood v. O. & B. Rapid-Transit Co., Supreme Ct. Cal., 40 Pac. Reporter, 806.

LIABILITY OF CONTRACTOR FOR NEGLIGENCE OF FOREMAN.—The act of the foreman of a building contractor in stretching a guy-rope across a railroad track to aid in taking down a derrick, is within the scope of his authority, so as to render the contractor liable for an accident caused by the rope to a switchman standing on a moving car, when the foreman had general charge of the work, and special charge of moving derricks, though the contractor had instructed him to employ a derrick specialist when moving derricks.

Reinke v. Bentley, Supreme Ct. Wis., 63 N. W. Rep. 1055.

CONSTRUCTION OF BUILDING CONTRACT AS TO ALTERATIONS.—A Contract provided that the builder should forfeit ten dollars for each day that the building remained unfinished after the time fixed by the agreement for its completion. It also provided that any change in the plans, "either in quantity or quality of the

work," should be executed by the builder, "without holding the contract as violated or void in any other respect." During the progress of the work a change was made in the material for the front of the building from brick and granite to Indiana stone, with carved panels and frieze. The difficulty in procuring a prompt delivery of the stone caused delay in finishing the building, and the owners claimed to recoup the stipulated forfeit and set off the loss of rents. By the agreement the owners reserved the right at any time during the progress of the work to make any alterations in the plans and specifications, and it became the duty of the builder to carry them into effect. The provision that the changed plans should be executed without holding the contract as violated or void on any other respect should be read in connection with this reserved right. The words "in any other respect" exclude the implication of any change in terms except such as would result from alteration of the plans, but not such changes as would be the necessary consequence thereof. Alterations calling for more work and materials, might, of necessity, require more time for the completion of the building. They might be directed so near the end of the work as to make it impossible to complete the building within the time stipulated. In this case the building was where the material fixed for the front by the contract could be purchased in an open market and delivered ready for use in one day. The stone required by the alteration could be procured only at the quarries in Indiana, where an order had to await its turn; and, after delivery, it required weeks of skilled labor to fit it for use in the building. For such delay in the completion of the building as was the necessary consequence of the change of plans by the owners the builder was not answerable, and for it no forfeiture could be exacted.

Lilly v. Person, Supreme Court of Pennsylvania, 32 At. Rep. 23.

BOOKS AND PERIODICALS.

THE ENGINEERING REVIEW for November, 1895, is largely given up to a record of the career and work of the Institute of Civil Engineers, it contains two special supplements the first: "An Illustration of the New House of the Institution of Civil Engineers" the second "A Portrait of Sir Benjamin Baker, K. C. M. G., President of the Institute of Civil Engineers."

Sir. Benjamin Baker was the designer of the famous Forth Bridge. On the fourth of March, 1890, the Prince of Wales stated some facts that are worth recalling. The extreme length of the bridge, including the approach viaduct, is one and one-fifth mile and twenty yards. The extreme height of the steel structure above high water mark, and above the bottom of the deepest foundation, is 452 feet.

The wind pressure provided for is fifty-six pounds on each square foot of area, amounting in the aggregate to about 7700 tons of lateral pressure on the Cantilever portion of the bridge.

We have been favored with a CATALOGUE of GLADDING McBEAN & CO., manufacturers of Vitrified Salt Glazed Sewer Pipe, as well as Architectural Terra Cotta. The well-known reputation of this firm is a guarantee that anything coming from their works is first-class. Office and depot, 1358 and 1360 Market street, San Francisco., manufactory at Lincoln, Placer County, Cal.

The KALENDAR of the ROYAL INSTITUTE OF BRITISH ARCHITECTS, November, 1895 to October, 1896. London, 9 Conduit street, Hanover Square.

The contents of this Annual show that much information of interest to architects is given. The Constitution and By-Laws, as well as a list of fellows are given, also an account of the mode of conducting the business of the Institute.

The complete novel in the December number of LIPPINCOTT'S monthly magazine is "The Old Silver Trail" by Mary E. Stickney.

In addition to the novel will be found an interesting list of articles from grave to gay, intended doubtless to give satisfaction to the many subscribers to this excellent magazine of every class however somber, or however gay.

The Journal of the ROYAL INSTITUTE OF BRITISH ARCHITECTS for November, 1895, contains the opening address, delivered by President Francis C. Penrose, F. R. S., at the first general meeting November 4, 1895. The address takes a wide review of what has been done and makes many suggestions that cannot fail to be of interest to architects in general. His remarks under the head of "Competitions and Competitors" are certainly very applicable to our architects, as well as those on the other side.

ILLVSTRATIONS.

RESIDENCE for Mrs. Lorena Brashear Showers, D. J. Patterson, Architect.

PROPOSED Design for Market Street Business Block, J. Cather Newsom, Architect.

TWO-STORY Residence, John J. & Thos. D. Newsom, Architects.

BUILDERS' Exchange, San Francisco, Cal., A. Page Brown, Architect.

EVERYTHING that you can see in the World around you, presents itself to your eyes only as an arrangement of patches of different colors variously shaded.—*Ruskin.*

YOU could not in a day measure the tints on so much as one side of a frost bitten apple.—*Ruskin.*

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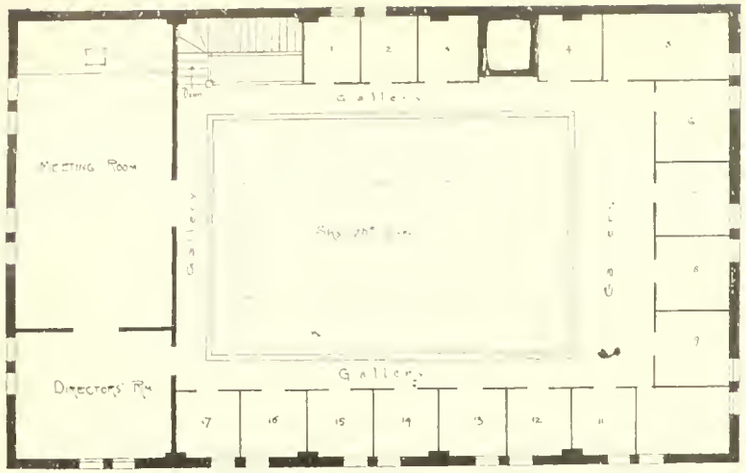
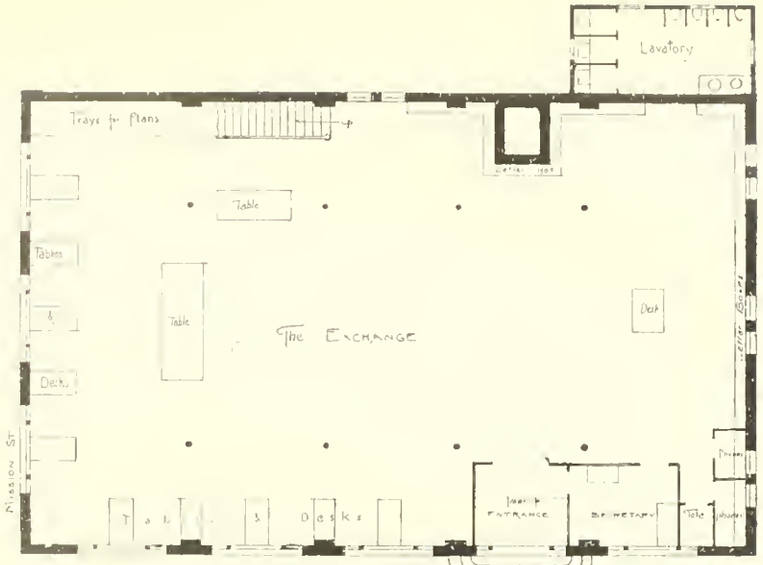
BUILDERS' EXCHANGE.

SAN FRANCISCO, CAL.

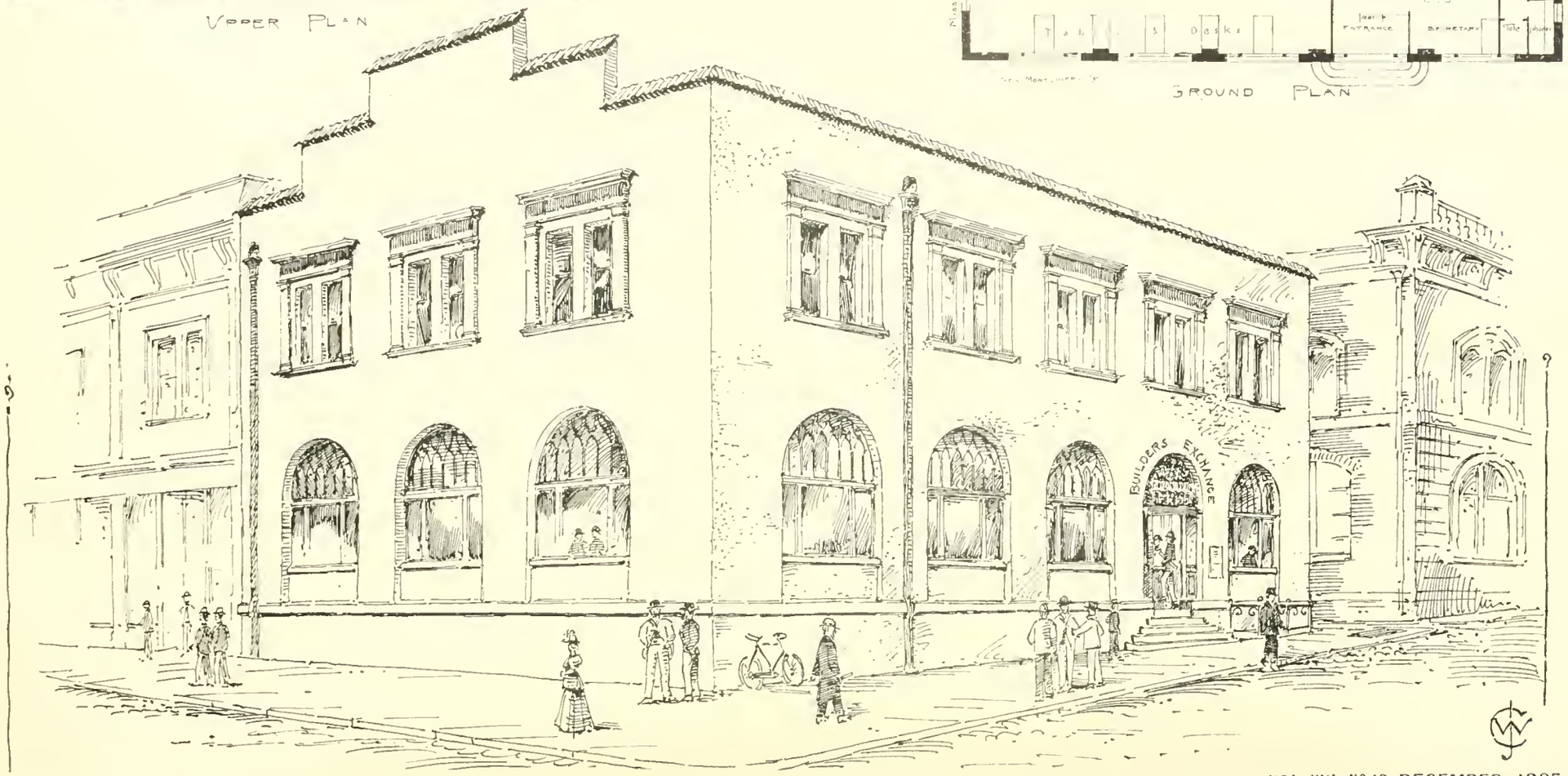
A. P. BROWN-Architect.



UPPER PLAN



GROUND PLAN



RESIDENCE · FOR
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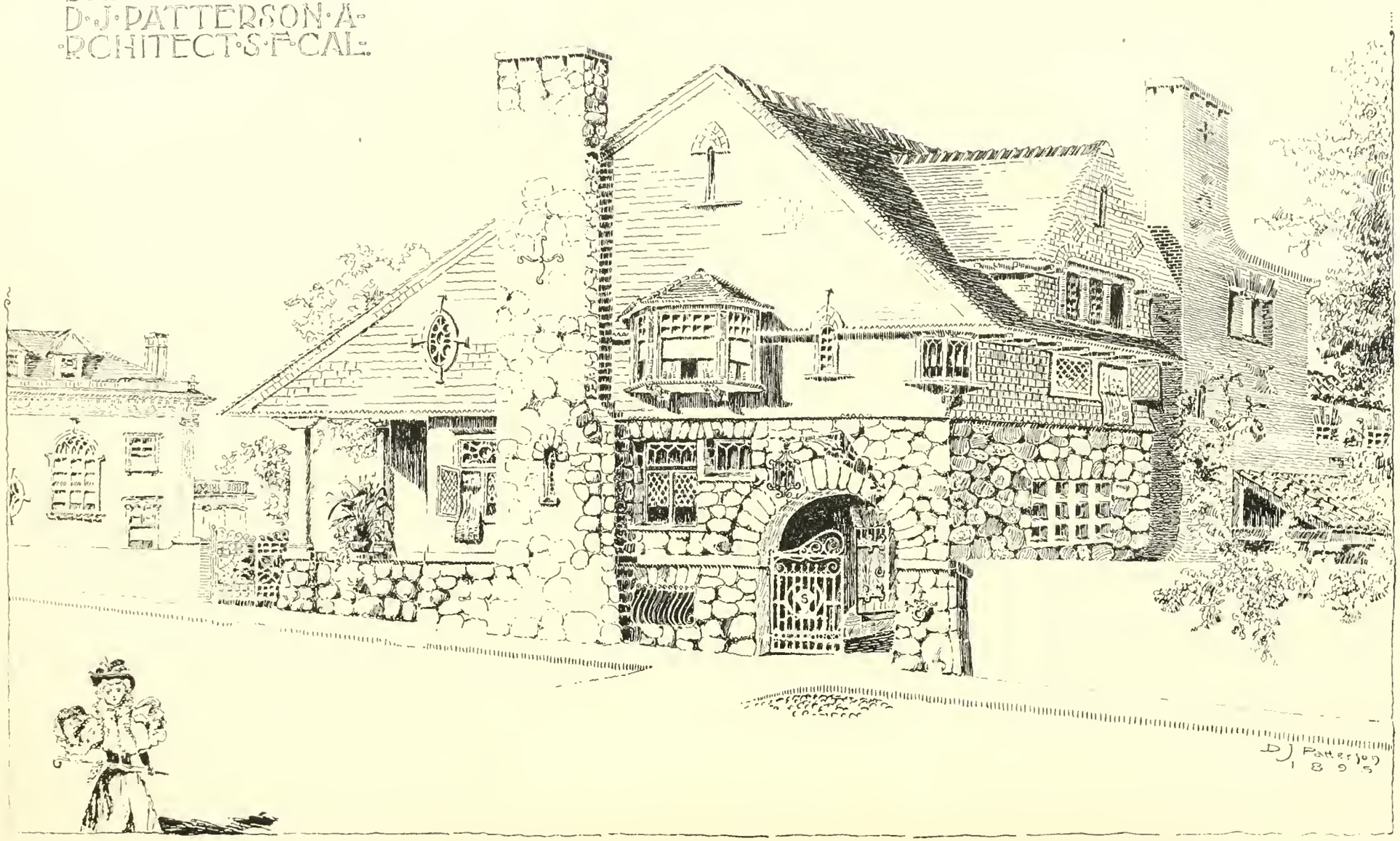
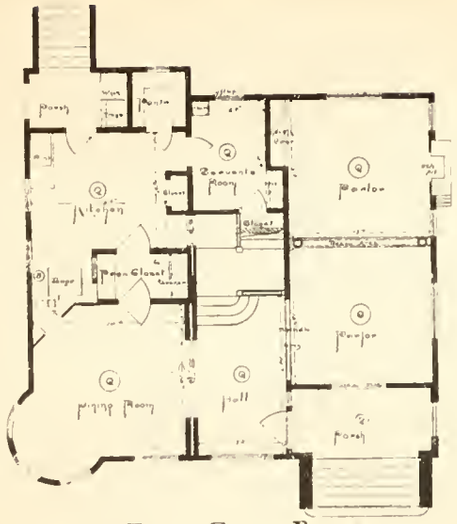
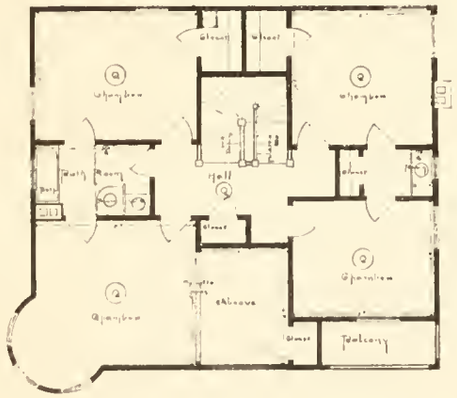




* FIRST STORY PLAN *



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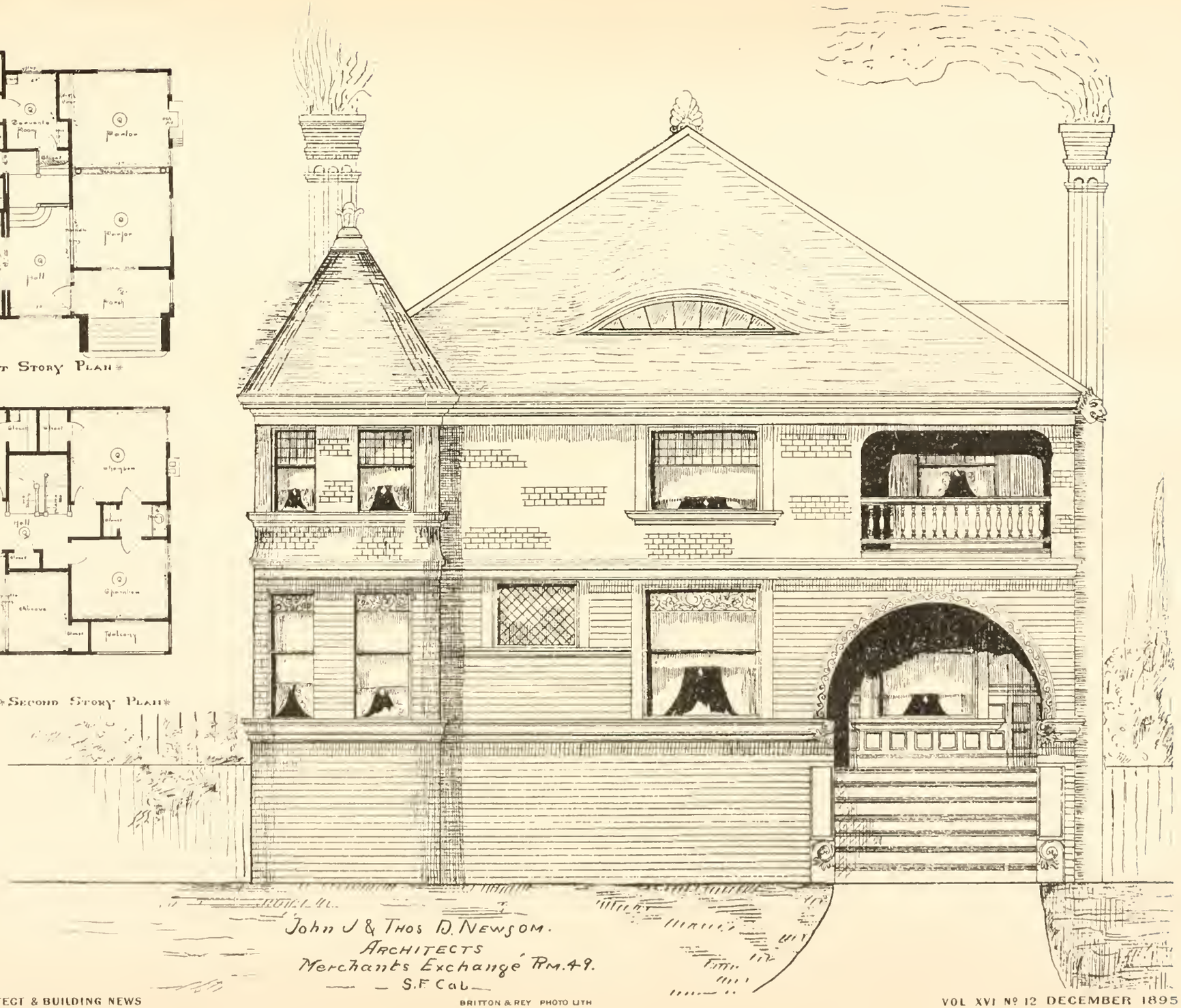

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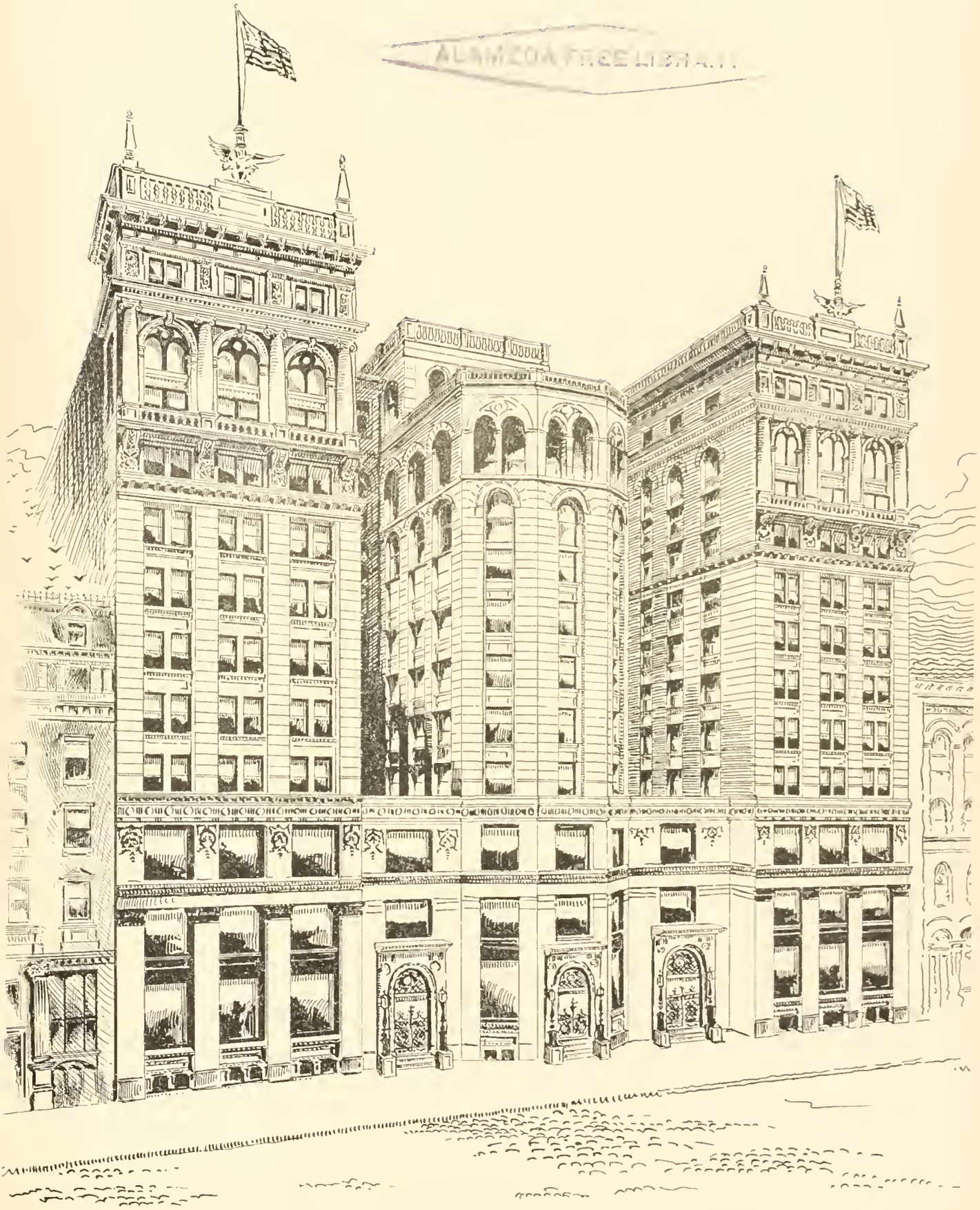

PROPOSED DESIGN FOR MARKET ST. BUSINESS BLOCK

J. CATHER NEWSOM ARCH'T

CALIFORNIA ARCHITECT & BUILDING NEWS
SAN FRANCISCO.

BRITTON & REY PHOTO. LITH

VOL. XVI Nº 12 DECEMBER 1895

NOTICE OF MEETINGS.

San Francisco Chapter, American Institute of Architects, meets second Friday of each month at 408 California street.
Seth Babson, Pres. W. P. Moore, Vice-Pres.
Oliver Everett, Sec. John M. Curtis, Treas.

Southern California Chapter American Institute of Architects, meets first Wednesday of each month at 114 Spring street, Los Angeles, Cal.
Octavius Morgan, Pres. A. M. Edelman, Vice-Pres.
Arthur B. Benton, Sec't. August Wackerbarth, Treas.

Technical Society of the Pacific Coast, meets first Friday of each month at Academy of Sciences Building.
C. E. Grunsky, Pres. Geo. W. Dickie, Vice-Pres.
Otto Von Geldern, Sec. W. C. Ralston, Treas.

California Electrical Society, meets the first and third Monday evenings of each month at the Academy of Sciences Building.
Geo. P. Low, Pres. C. O. Poole, Vice-Pres.
Max Caspari, Sec. H. T. Bestor, Treas.

WAGES AND RENT.

WORKMEN in this world are paying too much of their wages for rent! This is the opinion of Carroll D. Wright, United States Commissioner of Labor. He comes to this conclusion after making a recent investigation of the housing of the working classes in various countries of the world. One-fifth of the wages earned by the head of a family ought to be the maximum expenditure for rent in cities. This Commissioner Wright says, is agreed by the most competent economists. Hence the workman in the city who earn fifty dollars a month should not pay more than ten dollars of it each month to his landlord.

Commissioner Wright has collected information concerning houses and building enterprises for workmen in all of the larger countries of the world.

A French company which has formulated a scheme to assist its employees to become house-owners, rents a comfortable little cottage of brick and cut stone, with two stories, including a kitchen, parlor and two bed rooms, besides a cellar for only $2.32 per month in American money.

Through a real estate company at Rouen, France, comfortable houses are rented to workmen for about twenty-five cents a week, or four dollars a year, which amounts for those workmen receiving the lowest wages to but one day's salary in a week.

A celebrated chocolate manufacturer at Noisiel houses about 1400 of his employees at an average yearly rent of twenty-nine dollars, which is from a tenth to a twelfth of the wages of each family, besides giving free repairs, taxes, water, schools for employee's children, medical attendance, baths and literary and musical entertainments.

In Belgium there is a semi-official institution, the General Savings Bank, holding deposits guaranteed by the Government. This lends money to workmen at low rates of interest in order to encourage them in building their own homes. Through a system of life insurance likewise established under Belgian law, the family of a workman is given a home in case of his death. Commissioner Wright points with great emphasis to the importance of these institutions of the Belgian Government.

At Pullman, Ill., it is estimated that one-fifth of the wages paid go for rent.—*New York Herald.*

MAXIMS FOR DRAFTSMEN FROM RUSKIN.

The power of shading rightly depends mainly on *lightness* of hand and *keenness* of sight; but there are other qualities required in drawing dependent not only on lightness, but steadiness of hand; and the eye to be perfect in its power, must be made *accurate* as well as keen, and not only see shrewdly, but measure justly.—*Ruskin.*

Nearly *all* expression of form, in drawing, depends on your power of graduating delicately; and the graduation is always most skillful which passes from one tint to another *very little* paler.—*Ruskin.*

In darkness of ground there is the light of the little pebbles or dust; in darkness of foliage, the glitter of the leaves; in the darkness of flesh, transparency; in that of stone, granulation; in every case there is some mingling of light.—*Ruskin.*

An entire master of the pencil or brush ought indeed, to be able to draw any form at once as Giotto his circle; but such skill as this is only to be expected of the consummate master, having pencil in hand all his life, and all day long, hence, the force of Giotto's proof of his skill.—*Ruskin.*

THE BUILDERS' EXCHANGE.

THE Builders' Exchange of San Francisco is deserving of more than passing mention and praise as a useful and model public institution. Prior to its organization in July, 1890, the building business was in a chaotic state, owing to the absence of a recognized rendezvous and a uniformity in business dealings. At this time the brickmasons and the carpenter contractors each maintained separate small club-rooms for the accommodation of its members, but the vast army of manufacturers, dealers and agents of building materials, and contractors in the various building trades, could never meet each other with a certainty, a chance meeting on the street being all that could be hoped for.

With a view of facilitating business, correcting many evils, and a watchword of "Skill, Honor and Responsibility," a few members of the building business, namely, Chas. C. Terrell, Wm. N. Miller, A. W. Starbird, M. J. Donovan, C. C. Morehouse, J. R. Wilcox, John F. Riley, Wm. Cronan, J. K. Firth, A. Hosmer and George W. Duffy associated themselves together, organized The Builders' Exchange, and outlined its objects and aims as follows:—

"First.—To join *one* association all mechanics, manufacturers and dealers of good repute doing business in city and county of San Francisco, whose vocation connects them wholly or generally with the building industry, either as an employing contractor or manufacturer or dealer in building materials.

"2d.—To establish and maintain among the indivlduals so associated a just and equitable system of dealing and a uniformity in commercial usages by rules and regulations;

to acquire, preserve and disseminate valuable information regarding the business in which they are severally engaged.

"3d.—To procure (either by lease or purchase), furnish and maintain suitable rooms for the use of its members for meeting rooms, offices and other purposes.

"4th.—To establish and enforce a system of arbitration for the settlement of all disputes or controversies which may arise between its members or between its members and their employees and other persons.

"5th—To join or otherwise act in concert with other organizations of Employers of Labor, for the purpose of arbitrating all questions of dispute which may arise between said organization and the members thereof, or any of them, or between any of them and their employees. To the end that all matters of difference between the Employers of Labor and their employees may be amicably settled and adjusted without resort to strikes or lockouts."

Having clearly outlined a broad-gauge policy, the Association thus formed was duly incorporated, and a meeting place established at 330 Pine street, with the following officers:—President, Chas. C. Terrill; Vice-Pres., Wm. N. Miller; Treasurer, A. W. Starbird; Secretary, M. J. Donovan.

The corporation thus fairly started on its noble mission, soon won the confidence of the building fraternity—the brickmasons and carpenter contractors consolidating their clubrooms with the corporation.

The Pine street headquarters were soon deserted for more commodious rooms on Montgomery street, which soon became too small, and the large Hall of the Real Estate Exchange at 16 Post street engaged and the clerical force doubled. Again was it necessary to secure larger quarters, and a two-story brick structure was erected on the corner of Mission and New Montgomery streets to accommodate its 400 members.

During the Exchange hour, from 12 to 2 each day, may be found all the prominent building material dealers and contractors of San Francisco and bay cities, and business is transacted by an individual in this short time that could not be otherwise transacted in a whole day.

Not only has the power of the Exchange been great enough to correct many minor evils of the building business, but its influence is equally apparent in the Legislative body of the State, and the precepts and customs introduced by the Exchange have so permeated the building industry of San Francisco, that nowhere in the United States is the same volume of business disposed of in the same space of time and the same uniformity as in San Francisco.

The lower floor is used as a general assembly room; here also are the members' letter-boxes, private cases, telephone rooms and office of the corporation. The upper floor is divided up into private rooms, lodge room and directors' rooms. A large dome skylight, assisted by windows on three sides of the building, afford ample light and fresh air.

The Exchange is open to members and the public on all business days from 8 A. M. to 5 P. M., and an invitation is cordially extended to all parties identified with the building industry and the public in general to visit the Exchange, and examine into its workings.

The present officers and members are as follows:

President, Oscar Lewis; Vice-President, O. E. Brady; Secretary, Jas. A. Wilson; Treasurer, L. B. Sibley; Directors, W. B. Anderson, James McInerny, Chas. Dunlop, A. Kendall, Thos. W. Butcher, Thos. Elam, John T. Hayes; Recording Secretery, L. A. Larsen; Financial Secretary, S. D. North; Attorney, Wm. H. Cobb.

MEMBERS BUILDERS' EXCHANGE.

	Box No.
Abrahamson, P.; patent ventilators	123
Ackerson & Patterson, contractors and builders	343
Adams, John G.; contractor and builder	270
Alameda Brick & Tile Co.; brick	170
Ambrose, William F.; concrete and artificial stone	356
Anderson Bros.; contractors and builders	128
Architectural Iron Works; (O'Connell & Lewis)	47
Arizona Sandstone Co.; building stone	326
Artistic Decoration Co	337
Bassett Bros.; contractors and builders	6
Bass-Hueter Paint Co.; paints, oils and varnishes	136
Barry, James; mason and builder	118
Bateman Bros.; contractors and builders	236
Bay City Iron Works	266
Beck, Adam; mason and builder	11
Bell, Frank C.; contractor and builder	14
Bennett Bros.; hardware	320
Black, E. H.; painter	192
Boyd, Robert; mason and builder	77
Brady, M. V.; mason and builder	34
Brady, O. E., mason and builder	360
Brennan, D. J.; mason and builder	51
Brennan, M. & Son; carpenters add builders	297
Brennan & Fraser; plasterers	158
Britt, James E.; plumber	36
Brode, R.; iron works	295
Burden & Helm; masons and builders	260
Burnham, Stanford Co.; planing mill	28
Burrell, E. H.; building material	146
Burt, W. J.; house mover	296
Butler, Thos.; mason and builder	255
Butler, Wm. A.; mason and builder	
Butterworth, Thos. C.; art glass	371
California Sandstone and Contracting Co	230
California Art Glass Works	63
California Electrical Works	223
California Mills; planing mills	300
Campbell, Alex.; contractor and builder	105
Campbell & Pettus; contractors and builders	184
Carle, Silas; contractor and builder	
Cartwright, D. S.; teaming	10
Central Lumber & Mill Co.; lumber and planing mill	345
Chatham, Wm.; contractor and builder	62
Chisholm, C.; contractor and builder	44
Christy, Chas.; contractor and builder	276
Clark, N. & Sons; terra cotta, etc	290
Clawson, L. E., & Co.; patent chimneys	66
Coghlan, Frank; plasterer	91
Commary, Wm. T.; contractor and builder	
Concannon & Shay; contractors and builders	24
Conlin & Roberts; metal roofers	90
Cowell, H., & Co.; lime, cement, fire brick, etc	7
Crichton, Peter; contractor and builder	339
Crocker, Wm.; planing mill	12
Cronan, Wm.; Eagle Sheet Metal Works	26
Currie & Loomer; contractors and builders	227
Currie, Robert; contractor and builder	143
Cushing-Wetmore Co.; concrete and artificial stone	222
Curry, J. M.; stone dealer	35
Daniels, Gus. V.; painter and decorator	85
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BUSINESS MOSAICS.

No hotel, or other large building can be considered safe if not supplied with the new and improved Chapman Fire Hose Reel. It is the latest improvement and upon examination is universally conceded by all unprejudiced competent authority to be the most simple, practical and reliable Hose Reel apparatus in the word. R. S. Chapman will confirm this statement, 14 and 16 Fremont street, San Francisco.

Goodfellow—If my clothes were not too big for you, I'd give you an old suit. Hungry Hank (gratefully)—Boss' if you'd give me the price of a square meal, I warrant they'd fit me all right.—*Truth.*

N. & G. Taylor Co., Tinplate Manufacturers, Philadelphia, are out in a very neat blotter illustrating the brands of bright tinplates which they make. They state that all of their plates are made of the finest materials, and in a thorough manner, and they also call particular attention to the quality of pig tin used "being of exceptional fineness and purity."

Their "Brilliant" brand, extra fine quality, is the heaviest coated Bright Tin that can be made, and holds the same high position that their celebrated "Taylor Old Style" brand does in the list of brands of Roofing Tin. Buyers of Bright Tinplates should correspond with Messrs. N. & G. Taylor Co.

"Have you change for a $5 note?" asked one man of another. "Yes; certainly I have." "Ah! then lend me $2 for a day or two, there's a good fellow!"—*Tit-Bits.*

The J. L. Mott Iron Works are again to the fore with some more of their useful improvements to their sanitary plumbing work. These specialties are well worth seeing by all interested, at their well equipped show rooms in the Flood Building.

First Kid—Anyhow, I never had no granddaddy hung for horse stealin'. Second Kid—Don't care if he wuz. Horses wuz worth stealin' in them days."—*Cincinnati Enquirer.*

When a man decides upon improving his shop, factory or farm, by the addition of power, he naturally looks for something entirely up to date. He investigates, considers, and finally decides to buy an Ajax Coal Oil Gas Engine as meeting his requirements more fully, and being safer, than any other power obtainable. Palmer and Ray, San Francisco, Cal., the manufacturers of this engine, have earned the gratitude of the public by placing within its reach a reliable, economical power, that defies the restrictions of insurance companies. It is the latest and best.

Rischmuller's Door Opener and closer is another contrivance that you must have to be happy. This door opener and closer is the most simple and perfect of any in the market. A full sized working model can be seen at 320 Nineteenth street. Orders left with Geo. Rischmuller, 320 Nineteenth street, will be promptly attended to.

Miss Gushington—How did you feel when you found that the ship would surely go down in ten minutes? Captain Salted—I felt for a life-preserver.—*Harper's Bazar.*

Dixon's Silica Graphite Paint, manufactured by the Joseph Dixon Crucible Co., of Jersey City, N. J., will be used in painting all the tin work and skylights of the Post Office Department Building at Washington. A quantity will also be used on the Capitol, and the District Government Building.

Dudely—What are you going to be when you are grown up, Bobby? Bobby—I'm going to be a man. What are you going to be?—*Harper's Bazar.*

Samson Spot Cord.—If you want the best cord in the market, be sure you specify "Samson Spot Cord." Samples supplied upon application to the Samson Cordage works, Boston, Mass.

Miriam—Don't you think my new hat a poem, Ned? Ned—From its height, dear, I should instead compare it to a short story.—*Judge.*

The well known firm of J. L. Mott Iron Works, established in 1828, furnish a wonderful illustration of the vast improvements made in the line of their business since that date. Few are now living who were of age to appreciate good plumbing, when these works were first established, but the constant improvement ever since that time has been no secret to the public, who in the long run are always ready to respond and encourage a firm who appear ever ready to adapt new methods and devices where the wellfare of their customers is concerned.

Mr. M. S. James, the Pacific Coast representative of the firm, has opened a new office and show rooms at 27 Flood Building, San Francisco.

Mrs. Snagg—I understand that paper is made of wood now. Mr. Snagg—Yes, so is string. "String?" "Yes; what else do you suppose cordwood is used for?"—*Telegraph.*

All those who are troubled by the annoyance of flies, we would say call upon Edward B. Hindes & Co., 411 Mission street and examine their perfection window screens, if you once enjoy the comfort they give you will never be without them. A catalogue and prices will be forwarded upon application at their office.

CITY BUILDING NEWS.

Alamo Square. Coping round block; owner, City of San Francisco; contractors, California Concrete Co.; cost $3000.

Andover Ave. near Courtland Ave. Two-story frames; owner, P. Jackywiski contractor, P. Mandeson; cost $2000.

Baker near Greenwich. Two-story farme; owner, Mrs. Annie Kennedy; contractors. Kenely & Leterell; signed, Nov. 11; filed, Nov. 14; cost $1940.

Bartlett near 26th. Three-story frame; owner, J. M. Comerford; cost $4000.

Broderick near Fulton. Two-story frame; owner, John H. Hendy; contractor, Cranston & Keenan; signed, Dec. 3; filed, Dec. 5; cost $5000.

Bush near Baker. Two-story frame; owner, S. Magnin; architect, W. H. Lillie; contractor, W. Helbing; signed, Nov. 27; filed, Nov. 27; cost $1700.

Clay near Cherry. Two-story frame; owner, John J. Wirtner; architect, G. A. Dodge; contractor, G. H. Moore; signed, Nov. 11; filed, Nov. 18; cost $2008.

Clement near 9th Ave. Frame cottage except brick work, etc.; owner, Mrs. E. Downey; architect, E. Kollofrath; contractor, W. R. Kenney; signed, Nov. 18; filed, Nov. 18; cost $1000.

Cliff House. Sheds; owner, Adolph Sutro; architect, C. J. Colley; contractors, Campbell & Pettus; signed, Nov. 14; filed, Nov. 16; cost $4844.

Courtland Ave. and Kosciusko. Cottage; owner, Mrs. A. Kilstrom; contractors, Reit & Ahlgren; cost $1000.

Duncan near Dolores. Two-story frame; owner, J. M. Comerford; cost $3200.

East near Mission. Two-story brick; owner, Thomas Magee; architects, Percy & Hamilton; contractor, Riley & Loane; signed, Dec. 13; filed, Dec. 13; cost $3749.

Eddy and Hyde. Excavations and brick work; owner, O. H. Hund; architect, A. C. Lutgens; contractor, Ferdinand Wagner; signed, Dec. 2; filed, Dec. 3; cost $1900.

Eddy and Hyde. Carpenter, plastering, etc.; owner, O. H. Hund; architect, A. C. Lutgens; contractor; F. V. Steinman; signed, Dec. 2; filed, Dec. 3; cost $10,000.

Eleventh near Howard. Alterations and repairs; owner, Mary E. McDonald; architect, J. P. Brady; contractors, G. A. Fisher and T. J. Capp; signed, Nov. 25; filed, Nov. 29; cost $2085.

Farallones near Orizaba. Cottage; owner, Christine Bergdahl; architect, E. Tillman; contractors, Tillman Bros.; signed, Nov. 30; filed, Dec. 1; cost $1390.

Fourth Ave. near Pt. Lobos. Two-story frame; owner, R. R. Hind; superintendents, Townley Bros.; days work; cost $4000.

Fourth near Brennan. Two-story frame; owners, Simon and Yette Israel; contractors, L. Westerlund, J. Sandeen; signed, Nov. 29; filed, Nov. 29; cost $2657.

Fourth and Welsh. Excavations and concrete work; owner, John Shirley; architects, De Prosse & Meusdorffer; contractor, Geo. Goodman; signed, Nov. 16; filed, Nov. 18; cost $4612.

Fourth and Welsh. Carpenter work for two three-story frame buildings and one-story frame building; owner, John Shirley; architects, De Posse & Meusdorffer; contractor, H. A. Conrad; signed, Nov. 16; filed, Nov. 18; cost $14,400.

Fourth and Welsh. Mason work; owner, John Shirleo; architects, De Prosse & Meusdorffer; contractors, Miller & Beck; signed, Nov. 16; filed, Nov. 18; cost $1249.

Fourth and Welsh. Plumbing; owner, John Shirley; architects, De Prosse & Meusdorffer; contractor, H. Williamson; signed, Nov. 16; filed, Nov. 18; cost $2121.

Fourth and Welsh. Plastering; owner, John Shirley; architects, De Prosse & Meusdorffer; contractor, W. C. Watson; signed, Nov. 16; filed, Nov. 18; cost $1495.

Fourth and Welsh. Painting; owner, John Shirley; architects, De Prosse & Meusdorffer; contractor, J. F. Sullivan; signed, Nov. 16; filed, Nov. 18; cost $1120.

Fourth and Welsh. Brick work for ovens; owner, John Shirley; architects, De Prosse & Meusdorffer; contractor, Peter Glaser; cost $125.

Green near Hyde. Two-story frame; owner, Patrick Hogan; contractor, H. R. Schmuckert; signed, Nov. 13; filed, Nov. 26; cost $2850.

Julian near 15th. Alterations and additions; owner, Martin Fennell; architects, Shea & Shea; contractors, Bassett Bros.; signed, Dec. 4; filed, Dec. 11; cost $1900.

Lakeview Tract, lot 23, block 25. Two-story frame; owner, Carl R. Carlson; contractor, A. Dahlberg; signed, Nov. 18; filed, Nov. 19; cost $2600.

Larkspur Station. Two-story frame; owner, A. Brazil; contractor, Gustave A. Nagel; cost $2830.

Market near 5th. Stucco work for exterior; owner, Mrs. A. M. Parrott; architects, Pissis & Moore; contractor, Chas. Dunlap; signed, Nov. 27; filed, Dec. 5; cost $6700.

Market near 5th. Plastering; owner, Mrs. A. M. Parott; architect, Pissis & Moore; contractor, D. Leahy; signed, Dec. 3; filed, Dec. 10; cost $12,785.

Market near 5th. Plastering for basement; owner, Mrs. A. M. Parrott; architects. Pissis & Moore; contractor, D. O'Sullivan; signed, Nov. 15; filed, Nov. 18; cost $17,600.

Market near 5th. Fixtures, counters, etc.; owner, Mrs. A. M. Parrott; architect, Pissis & Moore; contractors, L. & E. Emanuel; signed, Nov. 27; filed, Dec. 5; cost $5475.

Market and 10th. Plumbing, etc.; owner, Timothy Hopkins; architect, H. A. Schulze; contractors, Snook & Son; signed, Nov. 15; filed, Nov. 27; cost $1382.

Masonic Ave. and Haight. Two-story frame; owner, Mrs. J. A. Bogart; architect, W. H. Lillie; contractors, Cranston & Keenan; signed, Nov. 19; filed, Nov. 21; cost $5100.

Masonic Ave. and Haight. Plumbing on five houses; owners, Cranston & Keenan; contractor, G. C. Sweeney; cost $1500.

Mission and Beal. Two-story brick; owner, J. F. Merrill; architects, Percy & Hamilton; contractor, R. Ringrose; signed, Nov. 12; filed, Nov. 13; cost $19,841.

O'Farrell near Powell. Brick building; owner, Frederick Ryer; architect, Chas. Geddes; contractor, Jas. McLean; signed, Nov. 16; filed, Nov. 16; cost $11,025.

Onondaga and Country Road. Two-story frame; owner, Catherine Carson; architect, A. J. Barnett; contractor Henry Luke; signed, Dec. 11; filed, Dec. 13; cost $2111.

Page near Webster. Two-story frame except gas-fitting and mantels; owner, H. Gustav Frautner; contractor, A. G. Johnson; signed, Nov. 18; filed, Nov. 23; cost $4271.

Point Lobos Road near Cliff. Frame depot building; owner, Sutro Railroad Co.; architect, C. J. Colley; contractors, Campbell & Pettus; signed, Nov. 14; filed, Nov. 16; cost $5980.

Sacramento near Broderick. Two-story frame; owner, Charles H. Hewitt; contractor, Philip Rive; signed, Dec. 5; filed, Dec. 10; cost $4235.

Second Ave. near California. Cottage; owner, M. Kahn; contractor, H. Peterson; signed, Nov. 26; filed, Nov. 30; cost $2000.

Stevenson near 3d. One-story brick; owners, Edison Light and Power Co.; architects, Percy & Hamilton; contractors, Riley & Loane; signed, Nov. 20; filed, Nov. 21; cost $3149.

Stuart near Mission. Excavations, pumping, etc.; owner, E. R. Lilienthal; architect, Clinton Day; contractors, Gray Bros.; signed, Dec. 9; filed, Dec. 11; cost $2985.

Sutter near Buchanan. Two-story frame; owner, A. G. Morris, architects, Herman & Swain; cost $4000.

Sixth and Townsend. Four smoke houses; owner, Western Meat Co.; architect, L. Greenbaum; contractor, Thomas Butler; signed, Nov. 29; filed, Nov. 30; cost $3045.

Sixth and Folsom. Plumbing, gas-fitting, etc.; owner, M. Israel; architects, Salfield & Kohlberg; signed, Nov. 26; filed, Nov. 30; cost $1060.

Valencia near 20th. Grading, chimneys, etc.; owner, Mrs. M. A. Rosekrans; architect, W. H. Lillie; contractors, Riley & Loane; signed, Nov. 25; filed, Nov. 27; cost $1695.

Valencia near 20th. Carpenter, mill work, etc.; owner, Mrs. M. A. Rosekrans; architect, W. H. Little; contractor, W. J. Field; signed, Nov. 25; filed, Nov. 27; cost $4200.

Valencia near 20th. Plumbing, etc.; owner, Mrs. M. A. Rosekrans; architect, W. H. Lillie; contractor, W. H. Tobin; signed, Nov. 25; filed, Nov. 27; cost $1050.

Van Ness Ave. and Clay. Plumbing; owner, Claus Spreckles; architects, Reid Bros.; contractor, W. F. Wilson; signed, Oct. 2; filed, Nov. 12; cost $6181.

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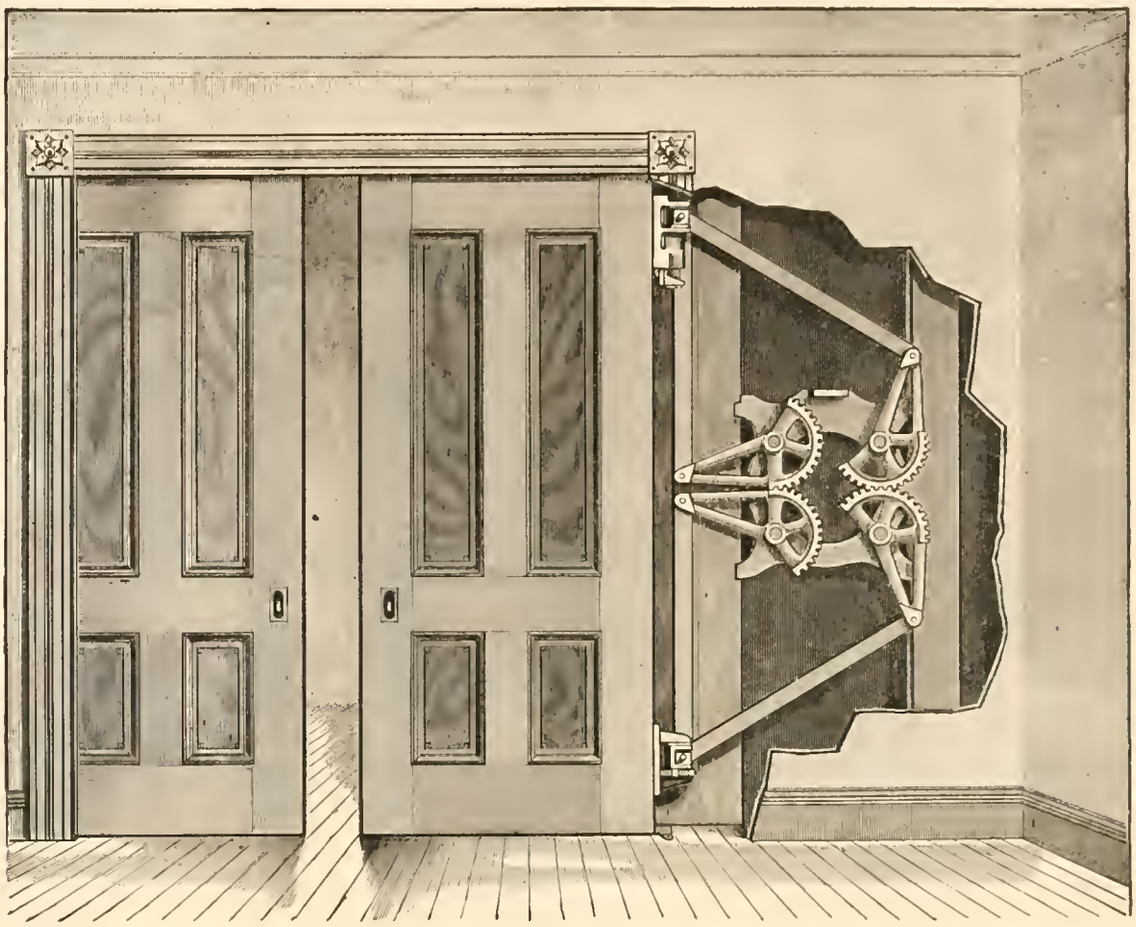

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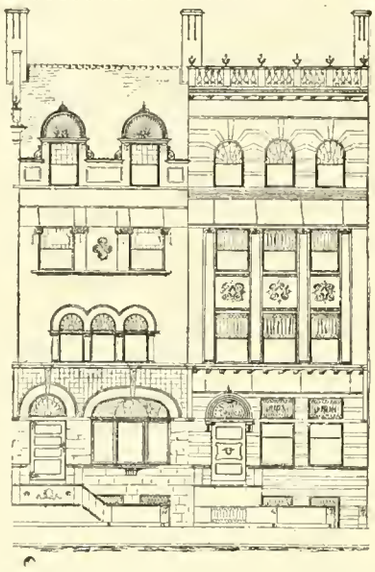

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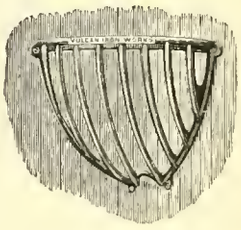

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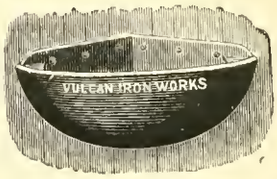

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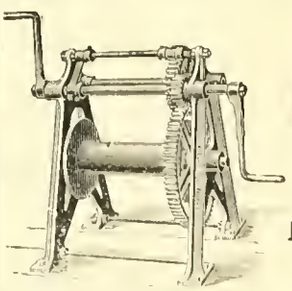

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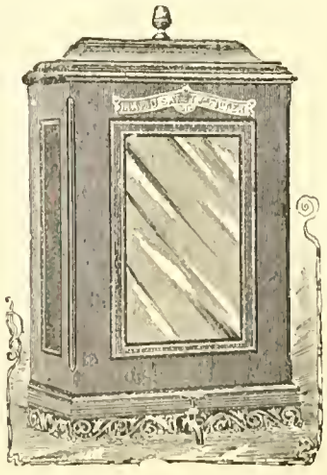

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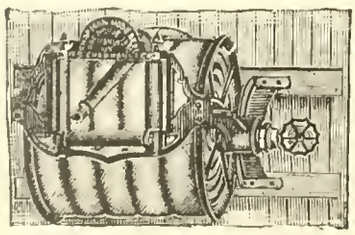

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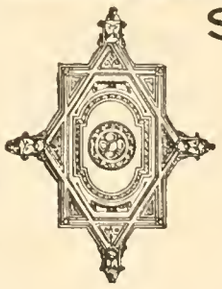

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